ML-82 II

(Gas - DSI/Steam Models)

Installation Manual

WARNING: For your safety the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or death.

Do not store or use gasoline or other flammable vapor and liquids in the vicinity of this or any other appliance.

WHAT DO YOU DO IF YOU SMELL GAS

* Do not try to light any appliance.
* Do not touch any electrical switch; do not use any phone in your building.
* Clear the room, building or area of all occupants.
* Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
* If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

AVERTISSEMENT: Assurez-vous de bien suivre les instructions données dans cette notice pour réduire au minimumle risque d'incendie ou d'explosion pour ou éviter tout dommage matériel, toute blessure ou la mort.

Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinagede cet appareil ou de tout autre appareil.

QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:

* Ne pas tenter d'allumer d'appareil.
* Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones se trouvant dans le bâtiment où vous vous trouvez.
* Évacuez la pièce le bâtiment ou la zone.
* Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
* Si vous ne pouvez rejoindre le fournisseur de gaz appelez le service des incendies.

Línstallation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualiifié ou par le fournisseur de gaz.

American Dryer Corp.

For replacement parts, contact the reseller from which the dryer was purchased or

American Dryer Corporation
88 Currant Road
Fall River MA 02720-4781
Telephone: (508) 678-9000 / Fax: (508) 678-9447
E-mail: techsupport@amdry.com
www.amdry.com

122900DX/rar

ADC Part No. 113312

Retain This Manual In A Safe Place For Future Reference

American Dryer Corporation products embody advanced concepts in engineering, design, and safety. If this product is properly maintained, it will provide many years of safe, efficient, and trouble-free operation.

ONLY qualified technicians should service this equipment.

OBSERVE ALL SAFETY PRECAUTIONS displayed on the equipment or specified in the installation manual included with the dryer.

The following "**FOR YOUR SAFETY**" caution **must be** posted near the dryer in a prominent location.

FOR YOUR SAFETY	POUR VOTRE SÉCURITÉ
Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.	Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de yout autre appareil.

We have tried to make this manual as complete as possible and hope you will find it useful. **ADC** reserves the right to make changes from time to time, without notice or obligation, in prices, specifications, colors, and material, and to change or discontinue models. The illustrations included in this manual may not depict your particular dryer **exactly**.

Important

For your convenience, log the following information:

DATE OF PURCHASE_____ **MODEL NO.** **ML-82 II**

RESELLER'S NAME _____

Serial Number(s) _____

_____

_____

Replacement parts can be obtained from your reseller or the **ADC** factory. When ordering replacement parts from the factory, you can FAX your order to **ADC** at (508) 678-9447 or telephone your order directly to the **ADC** Parts Department at (508) 678-9000. Please specify the dryer **model number** and **serial number** in addition to the **description** and **part number**, so that your order is processed accurately and promptly.

"IMPORTANT NOTE TO PURCHASER"

Information **must be** obtained from your local gas supplier on the instructions to be followed if the user smells gas. These instructions **must be** posted in a prominent location near the dryer.

IMPORTANT

YOU MUST DISCONNECT AND LOCKOUT THE ELECTRIC SUPPLY AND THE GAS SUPPLY OR THE STEAM SUPPLY BEFORE ANY COVERS OR GUARDS ARE REMOVED FROM THE MACHINE TO ALLOW ACCESS FOR CLEANING, ADJUSTING, INSTALLATION, OR TESTING OF ANY EQUIPMENT PER OSHA (Occupational Safety and Health Administration) **STANDARDS.**

"Caution: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper operation."

«Attention: Lor des opérations d'entretien des commandes étiqueter tous fils avant de les déconnecter. Toute erreur de câblage peut étre une source de danger et de panne.»

CAUTION

DRYERS SHOULD NEVER BE LEFT UNATTENDED WHILE IN OPERATION.

WARNING

CHILDREN SHOULD NOT BE ALLOWED TO PLAY ON OR NEAR THE DRYER(S).

CHILDREN SHOULD BE SUPERVISED IF NEAR DRYERS IN OPERATION.

FOR YOUR SAFETY

DO NOT DRY MOP HEADS IN THE DRYER.

DO NOT USE DRYER IN THE PRESENCE OF DRY CLEANING FUMES.

WARNING

UNDER NO CIRCUMSTANCES should the dryer door switch, lint drawer switch, or heat safety circuit ever be disabled.

WARNING

The dryer *must never be* operated with any of the back guards, outer tops, or service panels removed. PERSONAL INJURY OR FIRE COULD RESULT.

WARNING

DRYER *MUST NEVER BE* OPERATED WITHOUT THE LINT FILTER/SCREEN IN PLACE, EVEN IF AN EXTERNAL LINT COLLECTION SYSTEM IS USED.

IMPORTANT

PLEASE OBSERVE ALL SAFETY PRECAUTIONS displayed on the equipment and/or specified in the installation manual included with the dryer.

Dryers ***must not be*** installed or stored in an area where it **will be** exposed to water or weather.

The wiring diagram for the dryer is located in the front electrical control box area.

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SECTION I
IMPORTANT INFORMATION

A. RECEIVING AND HANDLING

The dryer is shipped in a protective stretch wrap cover with protective cardboard corners and top cover (or optional box) as a means of preventing damage in transit. Upon delivery, the dryer and/or packaging, and wooden skid **should be** visually inspected for shipping damage. If any damage whatsoever is noticed, inspect further before delivering carrier leaves.

Dryers damaged in shipment:

1. **ALL** dryers **should be** inspected upon receipt and before they are signed for.

2. If there is suspected damage or actual damage, the trucker's receipt **should be** so noted.

3. If the dryer is damaged beyond repair, it **should be** refused. Those dryers, which were not damaged in a damaged shipment, **should be** accepted, but the number received and the number refused **must be** noted on the receipt.

4. If you determine that the dryer was damaged after the trucker has left your location, you should call the delivering carrier's freight terminal immediately and file a claim. The freight company considers this concealed damage. This type of freight claim is very difficult to get paid and becomes extremely difficult when more than a day or two passes after the freight was delivered. It is your responsibility to file freight claims. Dryer/parts damaged in transit **cannot** be claimed under warranty.

5. Freight claims are the responsibility of the consignee, and **ALL** claims **must be** filed at the receiving end. **ADC** assumes no responsibility for freight claims or damages.

6. If you need assistance in handling the situation, please contact the **ADC** Traffic Manager at (508) 678-9000.

IMPORTANT: The dryer ***must be*** transported and handled in an upright position at **ALL** times.

B. SAFETY PRECAUTIONS

WARNING: For your safety, the information in this manual ***must be*** followed to minimize the risk of fire or explosion or to prevent property damage, personal injury, or loss of life.

WARNING: The dryer *must never be* operated with any of the back guards, outer tops, or service panels removed. PERSONAL INJURY OR FIRE COULD RESULT.

1. **DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

2. Purchaser/user should consult the local gas supplier for proper instructions to be followed in the event the user smells gas. The instructions **should be** posted in a prominent location.

3. WHAT TO DO IF YOU SMELL GAS...

   a. **DO NOT** try to light any appliance.

   b. **DO NOT** touch any electrical switch.

   c. **DO NOT** use any phone in your building.

   d. Clear the room, building, or area of **ALL** occupants.

   e. Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.

   f. If you **cannot** reach your gas supplier, call the fire department.

4. Installation and service **must be** performed by a qualified installer, service agency, or gas supplier.

5. Dryer(s) **must be** exhausted to the outdoors.

6. Although **ADC** produces a very versatile dryer, there are some articles that, due to fabric composition or cleaning method, **should not be** dried in it.

WARNING: Dry only water washed fabrics. ***DO NOT*** dry articles spotted or washed in dry cleaning solvents, a combustible detergent, or "all purpose" cleaner.
EXPLOSION COULD RESULT.

WARNING: ***DO NOT*** dry rags or articles coated or contaminated with gasoline, kerosene, oil, paint, or wax.
EXPLOSION COULD RESULT.

WARNING: ***DO NOT*** dry mop heads. Contamination by wax or flammable solvents will create a fire hazard.

WARNING: ***DO NOT*** use heat for drying articles that contain plastic, foam, sponge rubber, or similarly textured rubber materials. Drying in a heated basket (tumbler) may damage plastics or rubber and also may be a fire hazard.

7. A program **should be** established for the inspection and cleaning of lint in the burner area, exhaust ductwork, and area around the back of the dryer. The frequency of inspection and cleaning can best be determined from experience at each location.

WARNING: The collection of lint in the burner area and exhaust ductwork can create a potential fire hazard.

8. For personal safety, the dryer **must be** electrically grounded in accordance with local codes and/or the National Electrical Code ANSI/NFPA NO. 70-LATEST EDITION, or in Canada, the Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or LATEST EDITION.

NOTE: Failure to do so will VOID THE WARRANTY.

9. **UNDER NO CIRCUMSTANCES** should the dryer door switch, lint drawer switch, or heat safety circuit ever be disabled.

WARNING: PERSONAL INJURY OR FIRE COULD RESULT.

10. This dryer is not to be used in the presence of dry cleaning solvents or fumes.

11. Remove articles from the dryer as soon as the drying cycle has been completed.

WARNING: Articles left in the dryer after the drying and cooling cycles have been completed can create a fire hazard.

12. **READ AND FOLLOW ALL CAUTION AND DIRECTION LABELS ATTACHED TO THE DRYER**.

13. For safety, proper operation, and optimum performance, the dryer **must not be** operated with a load less than sixty-six percent (66%), 53 lbs (24.04 kg) of its rated capacity.

WARNING: YOU MUST DISCONNECT AND LOCKOUT THE ELECTRIC SUPPLY AND THE GAS SUPPLY OR THE STEAM SUPPLY BEFORE ANY COVERS OR GUARDS ARE REMOVED FROM THE MACHINE TO ALLOW ACCESS FOR CLEANING, ADJUSTING, INSTALLATION, OR TESTING OF ANY EQUIPMENT PER OSHA (Occupational Safety and Health Administration) **STANDARDS.**

SECTION II

SPECIFICATIONS/COMPONENT IDENTIFICATION

A. SPECIFICATIONS

BASKET (TUMBLER) DIAMETER			37”	**94 cm**
BASKET (TUMBLER) DEPTH			36”	**91.5 cm**
BASKET (TUMBLER) MOTOR			1/2 HP	**0.373 kw**
BLOWER MOTOR			3 HP	**2.2 kw**
DOOR OPENING (DIAMETER)			31-3/8”	**79.7 cm**
BASKET (TUMBLER) VOLUME			22.4 cu. ft.	**0.634 cu.m.**
DRYERS PER 20'/40' CONTAINER			10/20	
DRYERS PER 45'/48' TRUCK			24/26	
Gas	VOLTAGE AVAILABLE		208-460v 3ø 50/60 Hz	
	APPROX. NET WEIGHT		833 lbs	**377.8 kg**
	APPROX. SHIPPING WEIGHT		883 lbs	**400.5 kg**
	HEAT INPUT		270,000 btu/hr	**68,040 kcal/hr**
	AIRFLOW		1,700 cfm	**48.14 cmm**
	INLET PIPE CONNECTION*		1” F.P.T.	
Steam**	VOLTAGE AVAILABLE		208-460v 3ø 50/60 Hz	
	APPROX. NET WEIGHT		864 lbs	**392.7 kg**
	APPROX. SHIPPING WEIGHT		914 lbs	**415.5 kg**
	AIRFLOW		1,700 cfm	**48.14 cmm**
	COMPRESSED AIR VOLUME		0.75 cfh	**0.02 cmh**
	COMPRESSED AIR CONNECTION		1/8” F.P.T.	
	STEAM CONSUMPTION		BOILER HP NORMAL LOAD	
	375 lbs/hr	**170.5 kg/hr**	11	
	OPERATING STEAM PRESSURE		SUPPLY CONNECTION*	RETURN CONNECTION*
	125 PSI max	**8.6 bars**	1” F.P.T.	1” F.P.T.

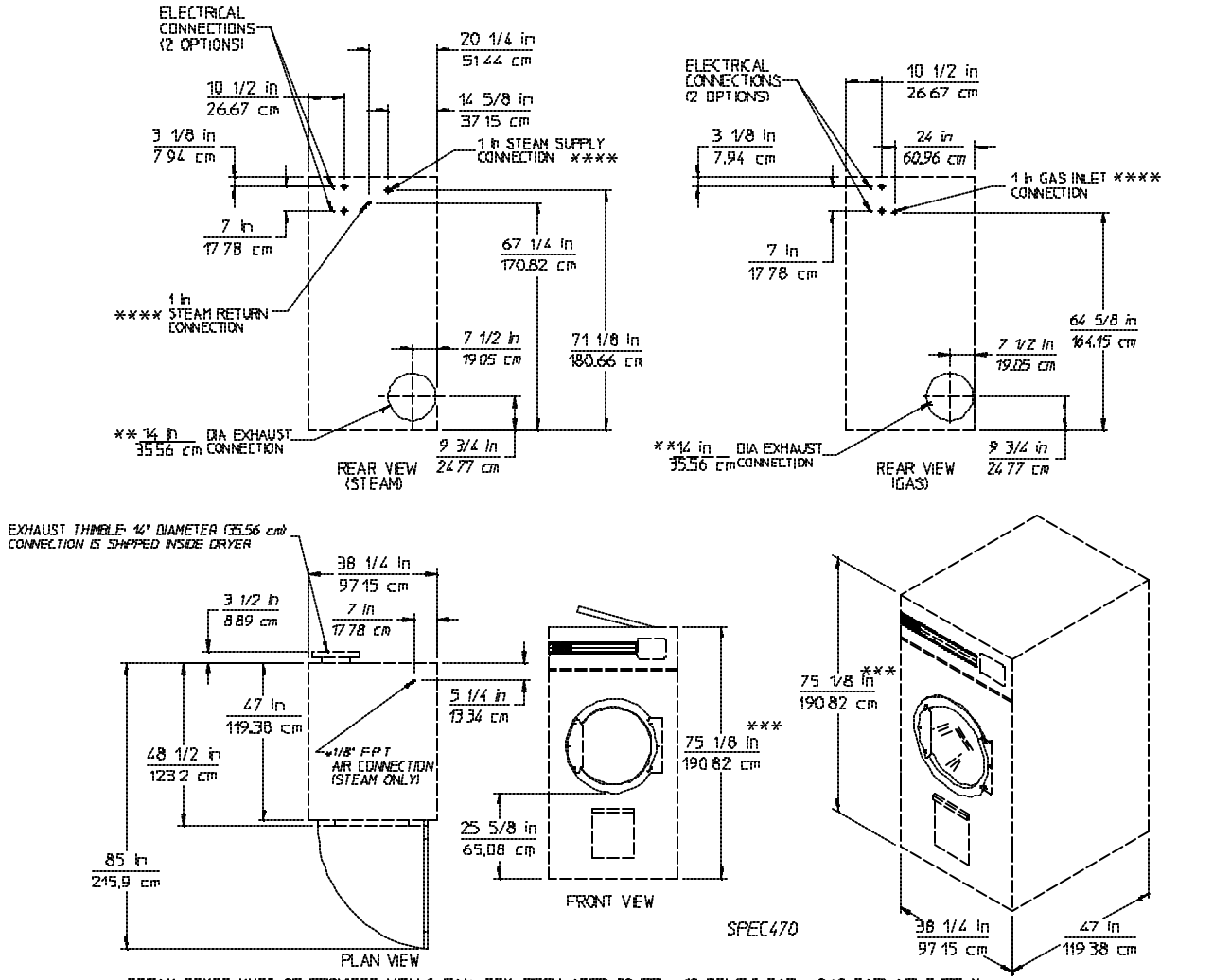
Shaded areas are stated in metric equivalents

* Size of piping to dryers varies with installation conditions.

** Steam dryers **must be** provided with a clean, dry, and regulated 80 PSI +/- 10 PSI (5.51 bars +/- 0.68 bars) air supply.

NOTE: ADC reserves the right to make changes in specifications at any time without notice or obligation.

Specifications
ML-82 II
(Gas and Steam ONLY)


ELECTRICAL CONNECTIONS (2 OPTIONS)
20 1/4 in 51.44 cm
10 1/2 in 26.67 cm
14 5/8 in 37.15 cm
3 1/8 in 7.94 cm
1 in STEAM SUPPLY CONNECTION ****
7 in 17.78 cm
67 1/4 in 170.82 cm
1 in **** STEAM RETURN CONNECTION
7 1/2 in 19.05 cm
71 1/8 in 180.66 cm
** 14 in 35.56 cm DIA EXHAUST CONNECTION
9 3/4 in 24.77 cm
REAR VIEW (STEAM)
ELECTRICAL CONNECTIONS (2 OPTIONS)
10 1/2 in 26.67 cm
3 1/8 in 7.94 cm
24 in 60.96 cm
1 in GAS INLET **** CONNECTION
7 in 17.78 cm
64 5/8 in 164.15 cm
7 1/2 in 19.05 cm
** 14 in 35.56 cm DIA EXHAUST CONNECTION
9 3/4 in 24.77 cm
REAR VIEW (GAS)
EXHAUST THIMBLE 14" DIAMETER (35.56 cm) CONNECTION IS SHIPPED INSIDE DRYER
38 1/4 in 97.15 cm
3 1/2 in 8.89 cm
7 in 17.78 cm
47 in 119.38 cm
5 1/4 in 13.34 cm
48 1/2 in 123.2 cm
1/8" FPT AIR CONNECTION (STEAM ONLY)
85 in 215.9 cm
PLAN VIEW
75 1/8 in *** 190.82 cm
25 5/8 in 65.08 cm
FRONT VIEW
75 1/8 in *** 190.82 cm
38 1/4 in 97.15 cm
47 in 119.38 cm
SPEC470

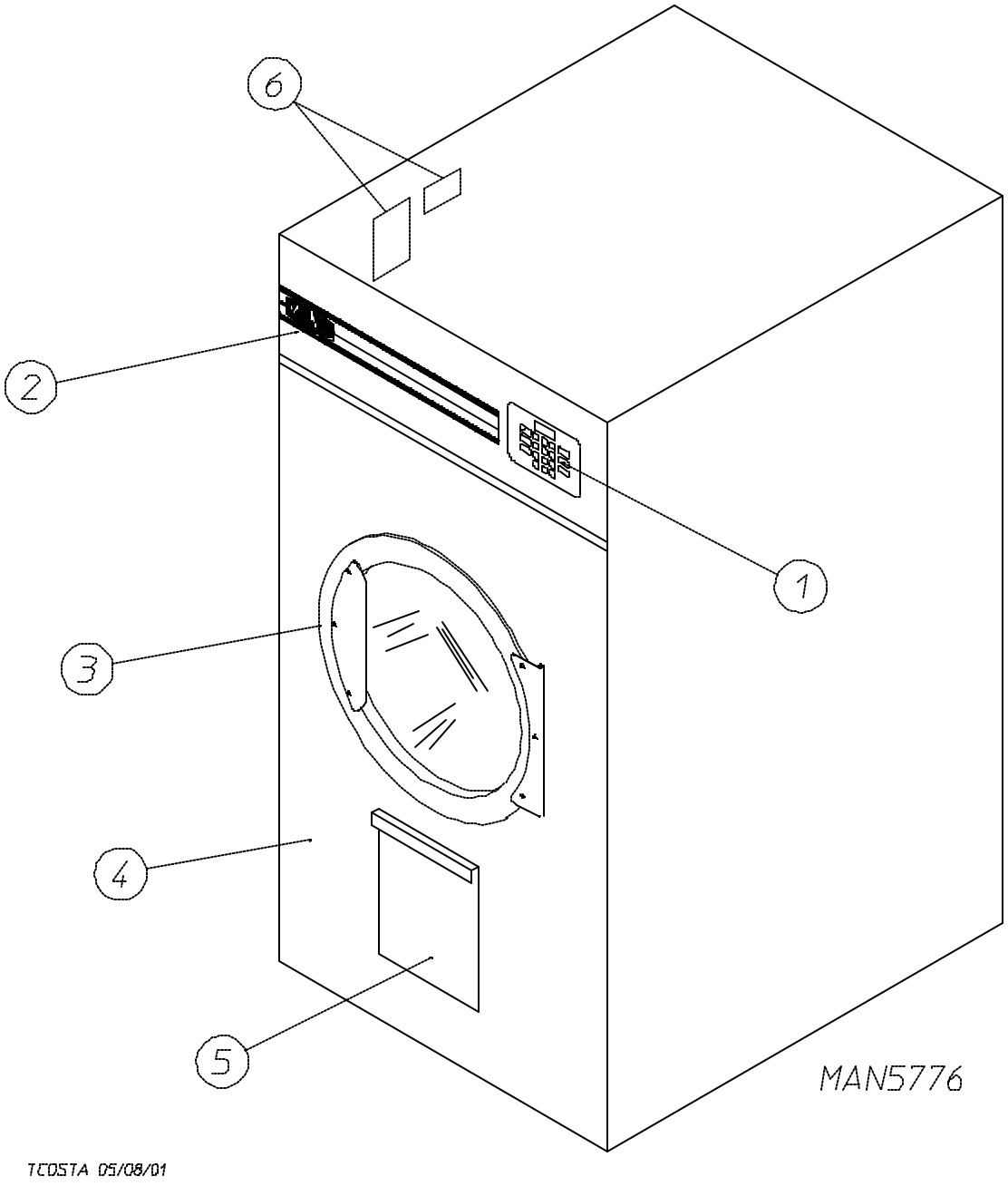
* STEAM DRYER MUST BE PROVIDED WITH CLEAN, DRY, REGULATED 80 PSI ± 10 PSI (5.5 BAR ± 0.69 BAR) AIR SUPPLY
** DUCT WORK SIZE VARIES WITH INSTALLATION CONDITIONS. EXHAUST STATIC PRESSURE SHOULD NOT EXCEED 0.3" (0.74 mb) WATER COLUMN.
*** OPERATING HEIGHT FOR STEAM UNIT IS 81" (205.74cm)
**** SIZE OF PIPING TO DRYER VARIES WITH INSTALLATION CONDITIONS CONTACT FACTORY FOR ASSISTANCE

LF 12/27/00

NOTE: **ADC** reserves the right to make changes in specifications at any time without notice or obligation.

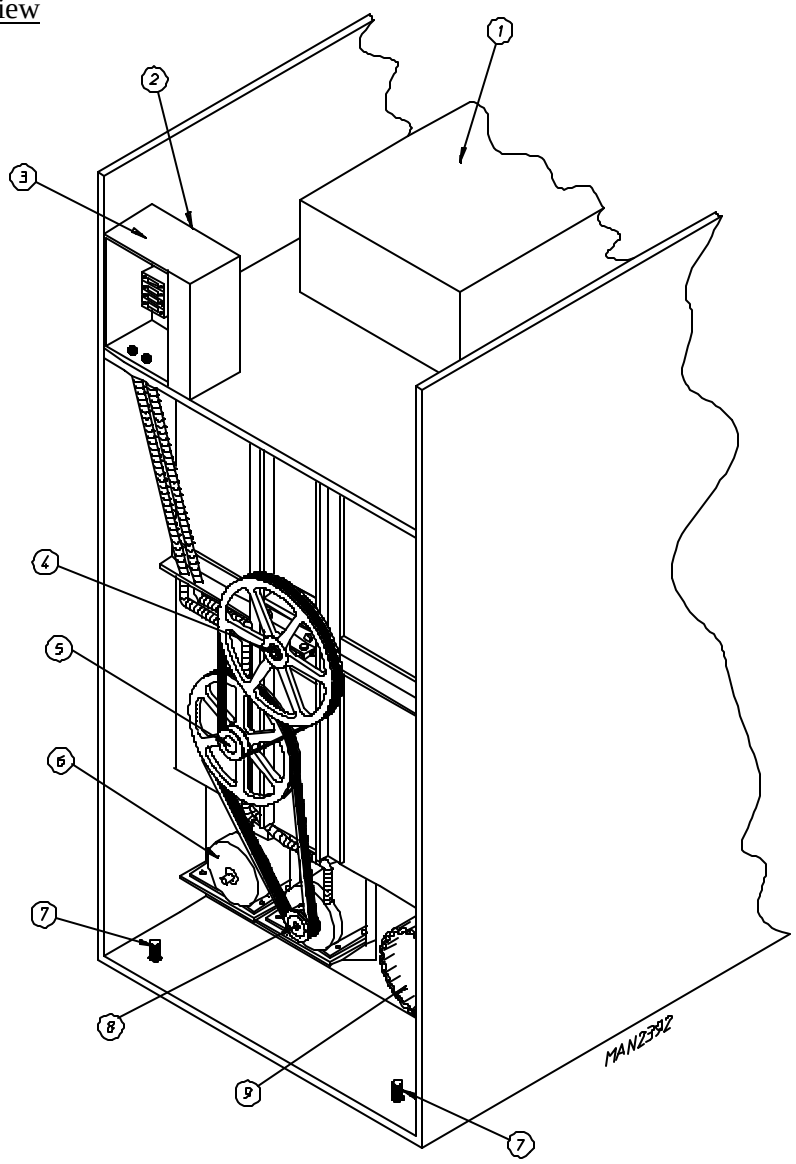
B. COMPONENT IDENTIFICATION

1. Dryer Front View



Illus. No.	Description
1	Controls
2	Control (top access) Door Assembly
3	Main Door Assembly
4	Lint Compartment Area (lint screen located behind door)
5	Lint Drawer
6	Data Label and Installation Label (located on the upper left side panel area behind the top control [access] door)

2. Dryer Rear View



Illus. No.	Description
1	Heating Unit
2	1/8-inch Compressed Air Supply Inlet (behind electric service relay box for steam units only)
3*	Electric Service Relay Box
4	Basket (tumbler) Bearing Mount Assembly
5	Idler Bearing Mount Assembly
6	Blower Motor Assembly
7	Leveling Leg (rear)
8	Basket (drive) Motor Assembly (reversing models only)
9	Dryer Exhaust

* Electric service connections for gas models and steam models are made in this box.

NOTE: 1/8-inch compressed air supply inlet (for steam models only) is located behind the electric service relay box.

SECTION III
INSTALLATION PROCEDURES

Installation **should be** performed by competent technicians in accordance with local and state codes. In the absence of these codes, the installation **must conform** to applicable American National Standards: ANSI Z223.1-LATEST EDITION (National Fuel Gas Code) or ANSI/NFPA NO. 70-LATEST EDITION (National Electrical Code) or in Canada, the installation **must conform** to applicable Canadian Standards: CAN/CGA-B149.1-M91 (Natural Gas) or CAN/CGA-B149.2-M91 (Liquid Propane [L.P.] Gas) or LATEST EDITION (for General Installation and Gas Plumbing) or Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or LATEST EDITION (for Electrical Connections).

A. LOCATION REQUIREMENTS

Before installing the dryer, be sure the location conforms to local codes and ordinances. In the absence of such codes or ordinances the location **must conform** with the National Fuel Gas Code ANSI.Z223.1 LATEST EDITION, or in Canada, the installation **must conform** to applicable Canadian Standards: CAN/CGA-B149.1-M91 (Natural Gas) or CAN/CGA-B149.2-M91 (L.P. Gas) or LATEST EDITION (for General Installation and Gas Plumbing).

1. The dryer **must be** installed on a sound level floor capable of supporting its weight. Carpeting **must be** removed from the floor area that the dryer is to rest on.

IMPORTANT: "The dryer ***must be*** installed on noncombustible floors only."

2. The dryer **must not be** installed or stored in an area where it will be exposed to water and/or weather.

3. The dryer is for use in noncombustible locations.

4. Provisions for adequate air supply **must be** provided as noted in this manual (refer to **Fresh Air Supply Requirements** in **Section D**).

5. Clearance provisions **must be** made from combustible construction as noted in this manual (refer to **Dryer Enclosure Requirements** in **Section C**).

6. Provisions **must be** made for adequate clearances for servicing and for operation as noted in this manual (refer to **Dryer Enclosure Requirements** in **Section C**).

7. Dryer **must be** exhausted to the outdoors as noted in this manual (refer to **Exhaust Requirements** in **Section E**).

8. Dryer **must be** located in an area where correct exhaust venting can be achieved as noted in this manual (refer to **Exhaust Requirements** in **Section E**).

IMPORTANT: Dryer ***should be*** located where a minimum amount of exhaust duct **will be** necessary.

9. The dryer **must be** installed with a proper exhaust duct connection to the outside.

10. The dryer **must be** installed with provisions for adequate combustion and make-up air supply.

CAUTION: This dryer produces combustible lint and ***must be*** exhausted to the outdoors. Every 6 months, inspect the exhaust ducting and remove any lint build up.

B. UNPACKING/SETTING UP

Remove protective shipping material (i.e., plastic wrap and optional shipping box) from dryer.

IMPORTANT: Dryer ***must be*** transported and handled in an upright position at **ALL** times.

The dryer can be moved to its final location with or without the skid attached. To unskid the dryer, locate and remove the four (4) bolts securing the base of the dryer to the wooden skid. Two (2) are located at the rear base (remove the back panel for access), and two (2) are located in the bottom of the lint chamber. To remove the two (2) bolts located in the lint chamber area, remove lint drawer completely. (Refer to **page 39** for lint drawer removal instructions.) Once the bolts are removed and the lint drawer is reinserted, slide the dryer off of the skid.

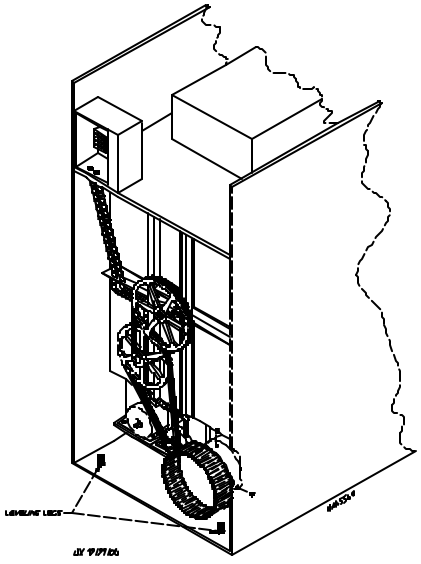
With the skid removed, to make it easier to slide the dryer into its final position, slightly lower **ALL** four (4) leveling legs, so that the dryer will slide on the legs instead of the base frame.

1. Inside the basket (tumbler) of this dryer is an exhaust transition piece that **must be** installed on the outlet of the exhaust before any further venting is connected. To do this, follow the procedures listed below:

   a. Remove the exhaust transition piece from the basket (tumbler) and place it on the exhaust outlet.

   b. Using the screws provided, secure the exhaust transition piece to the dryer.

NOTE: **It is recommended** that this joint be taped as well as **ALL** other duct joints to prevent moisture and lint from escaping into the building.



WARNING

An exhaust duct transition piece is shipped inside of the dryer's tumbler and **must be** installed on the dryer's exhaust duct, with the hardware provided, **BEFORE** location venting is connected to the dryer.

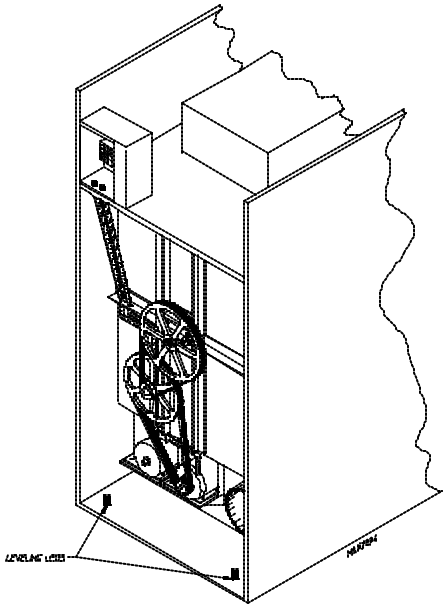
THIS EXHAUST DUCT TRANSITION PIECE MUST BE INSTALLED FIRST!

Failure to observe this installation requirement may result in damage to the dryer, create a **FIRE HAZARD** and will **VOID** the manufacturer's warranty.

012999JEV-GS/cj P/N: 114092

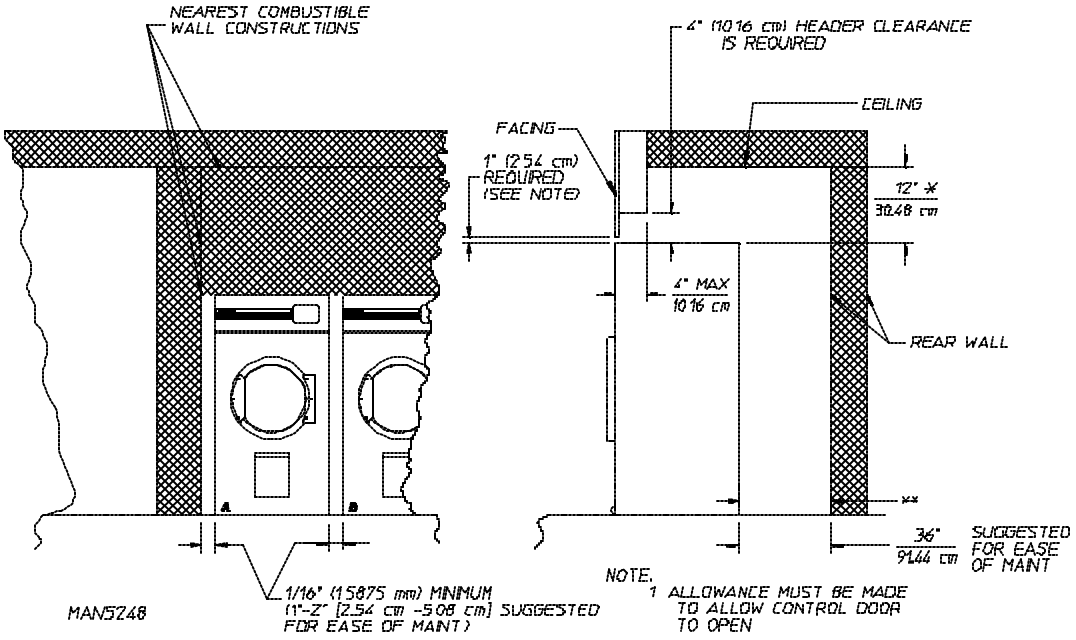
2. Leveling Dryer

The dryer is equipped with four (4) leveling legs, one (1) at each corner of the dryer base. Two (2) are located at the rear of the dryer base, and two (2) are located in the lint chamber. To increase bearing life and improve efficiency, the dryer **should be** tilted slightly to the rear.



C. DRYER ENCLOSURE REQUIREMENTS

Bulkheads and partitions **should be** made of noncombustible materials and **must be** located a minimum of 12-inches (30.48 cm), 18-inches (45.72 cm) or more is recommended for ease of installation, maintenance, and service, above the dryer outer top, except along the front of the dryer which may be partially closed in if desired. The clearance between the bulkhead header and the dryer **must be** a minimum of 4-inches (10.16 cm) and must not extend more than 4-inches (10.16 cm) to the rear of the front. The bulkhead facing **must not be** closed in **ALL** the way to the top of the dryer. A 1-inch (2.54 cm) clearance is required.


NEAREST COMBUSTIBLE WALL CONSTRUCTIONS
4" (10.16 cm) HEADER CLEARANCE IS REQUIRED
CEILING
FACING
1" (2.54 cm) REQUIRED (SEE NOTE)
12" * 30.48 cm
4" MAX 10.16 cm
REAR WALL
**
36" 91.44 cm
SUGGESTED FOR EASE OF MAINT
A
B
1/16" (1.5875 mm) MINIMUM (1"-2" [2.54 cm - 5.08 cm] SUGGESTED FOR EASE OF MAINT)
MAN5248
NOTE.
1 ALLOWANCE MUST BE MADE TO ALLOW CONTROL DOOR TO OPEN

*IN CASES WHERE SPRINKLER HEADS ARE OVER THE DRYERS 18" (45.72 cm) IS SUGGESTED.
**24" (60.96 cm) PERMITTED FOR INSTALLATIONS WITH HORIZONTAL VENTING

INSTALLATION. DRYER CLEARANCE TO ADJACENT WALL STRUCTURES

TC 04/28/00

NOTE: Allowances ***must be*** made for opening the control door.

Dryers may be positioned sidewall to sidewall. However, a 1/16-inch (1.5875 mm) minimum allowance **must be** made for opening and closing of the control door and the lint door. It is suggested that the dryer be positioned about 2 feet (0.61 meters) away from the nearest obstruction for ease of installation, maintenance, and service (to be measured from the back guard). Refer to the **illustration above** for details.

NOTE: Air considerations are important for proper and efficient operation.

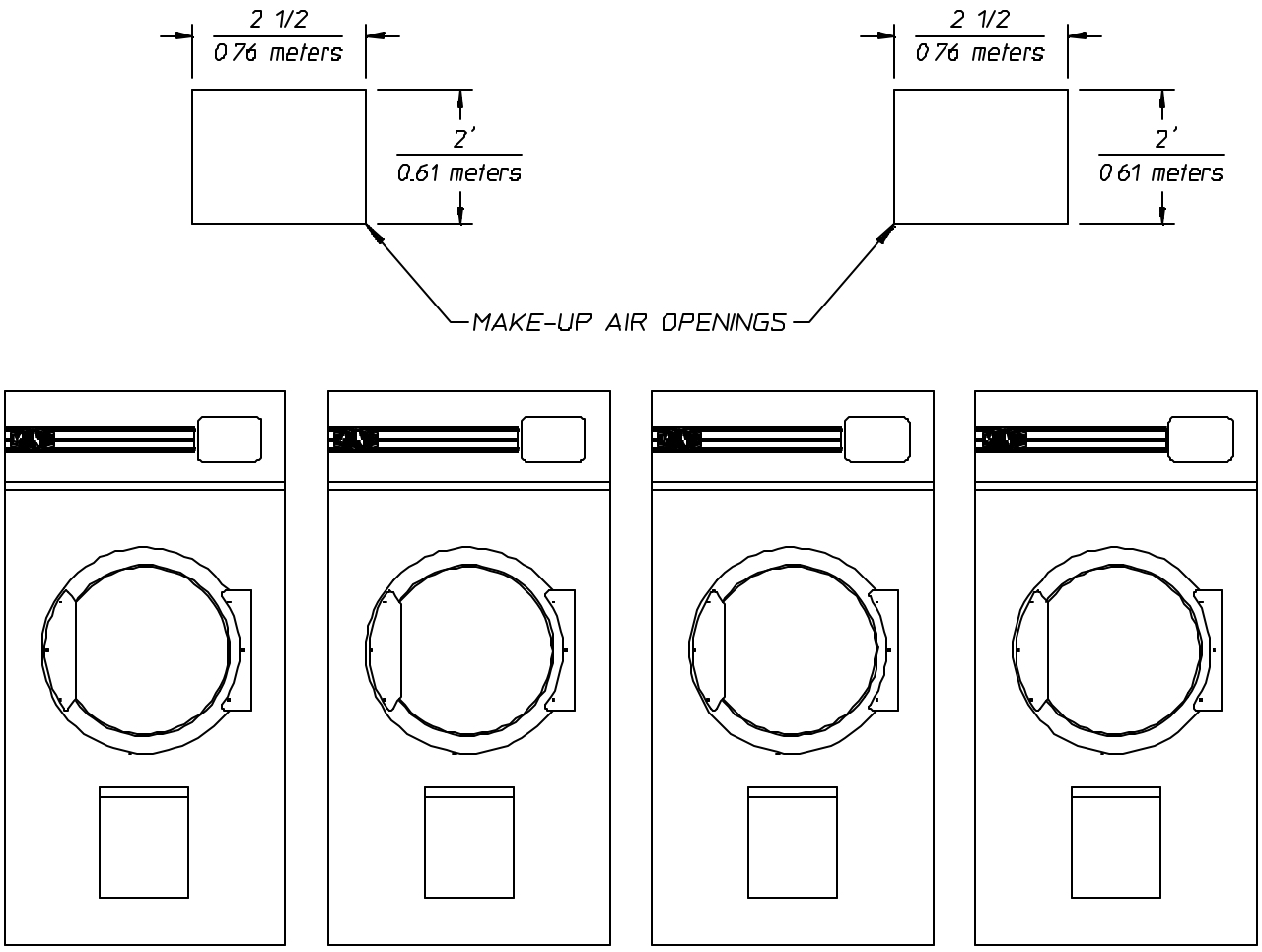
IMPORTANT: Even though a minimum of only 12-inches (30.48 cm) is required, 18-inches (45.72 cm) or more is suggested. The additional clearance is advantageous for ease of installation and service.

IMPORTANT: When fire sprinkler systems are located above the dryers, a minimum of 18-inches (45.72 cm) above the dryer console (module) is required. Dryers may be positioned sidewall to sidewall. However, a 1/16-inch (1.5875 mm) minimum allowance is required between dryers (or wall) for ease of installation and maintenance. Allowances ***must be*** made for the opening and closing of the control door and the lint door.

D. FRESH AIR SUPPLY REQUIREMENTS

When the dryer is operating, it draws in room air, heats it, passes this air through the basket (tumbler), and exhausts it out of the building. Therefore, the room air **must be** continually replenished from the outdoors. If the make-up air is inadequate, drying time and drying efficiency will be adversely affected. Ignition problems and sail switch "fluttering" problems may result, as well as premature motor failure from overheating.

Air supply (make-up air) **must be** given careful consideration to assure proper performance of each dryer. An unrestricted source of air is necessary for each dryer. An airflow of 1,700 cfm (cubic feet per minute) - 48.14 cmm (cubic meters per minute) - **must be** supplied to each dryer. As a general rule, an unrestricted air entrance from the outdoors (atmosphere) of a minimum of 2-1/2 square feet (0.23 square meters) is required for each dryer. The dryer **must be** installed with provisions for adequate combustion and make-up air supply.



TCOSTA 04/19/00 TYPICAL INSTALLATION SHOWING MAKE-UP AIR OPENINGS
MAN5224

To compensate for the use of registers or louvers used over the openings, this make-up air **must be** increased by approximately thirty-three percent (33%). Make-up air openings **should not be** located in an area directly near where exhaust vents exit the building.

It is not necessary to have separate make-up air openings for each dryer. Common make-up air openings are acceptable. However, they **must be** set up in such a manner that the make-up air is distributed equally to **ALL** the dryers.

EXAMPLE: For a bank of four (4) dryers, two (2) unrestricted openings measuring 2-1/2 feet by 2 feet (0.76 meters by 0.61 meters) - 10 square feet (0.93 square meters) - is acceptable.

Allowances **must be** made for remote or constricting passageways or where dryers are located at excessive altitudes or predominantly low pressure areas.

IMPORTANT: Make-up air ***must be*** provided from a source free of dry cleaning solvent fumes. Make-up air that is contaminated by dry cleaning solvent fumes will result in irreparable damage to the motors and other dryer components.

NOTE: Component failure due to dry cleaning solvent fumes will VOID THE WARRANTY.

E. EXHAUST REQUIREMENTS

1. General Exhaust Ductwork Information

Exhaust ductwork **should be** designed and installed by a qualified professional. Improperly sized ductwork will create excessive back pressure which results in slow drying, increased use of energy, overheating of the dryer, and shut down of the burner by the airflow (sail) switches, burner hi-limits, or basket (tumbler) hi-heat thermostats. The dryer **must be** installed with a proper exhaust duct connection to the outside.

CAUTION: This dryer produces combustible lint and ***must be*** exhausted to the outdoors.

CAUTION: DRYER ***MUST BE*** EXHAUSTED TO THE OUTDOORS.

CAUTION: IMPROPERLY SIZED OR INSTALLED EXHAUST DUCTWORK CAN CREATE A POTENTIAL FIRE HAZARD.

The ductwork **should be** laid out in such a way that the ductwork travels as directly as possible to the outdoors with as few turns as possible. Single or independent dryer venting is recommended.

When single dryer venting is used, the length of ductwork from the dryer to the outside exhaust outlet **must not exceed** 15 feet (4.57 meters). The minimum diameter of this ductwork **must be** at least 14-inches (35.56 cm). In the case of multiple (common) dryer venting, the distance from the last dryer to the outside exhaust outlet **must not exceed** 15 feet (4.57 meters). The shape of the ductwork is not critical so long as the minimum cross-sectional area is provided. It is suggested that the use of 90° turns be avoided; use 30° and/or 45° angles instead. The radius of the elbows **should preferably be** 1-1/2 times the diameter of the duct. Including basket (tumbler) and dryer elbow connections or elbows used for outside protection from the weather, no more than two (2) elbows **should be** used in the exhaust duct run. If more than two (2) elbows are used, the cross-sectional area of the ductwork **must be** increased.

ALL ductwork **should be** smooth inside with no projections from sheet metal screws or other obstructions, which will collect lint. When adding ducts, the duct to be added should overlap the duct to which it is to be connected. **ALL** ductwork joints **must be** taped to prevent moisture and lint from escaping into the building. Inspection doors **should be** installed at strategic points in the exhaust ductwork for periodic inspection and cleaning of lint from the ductwork.

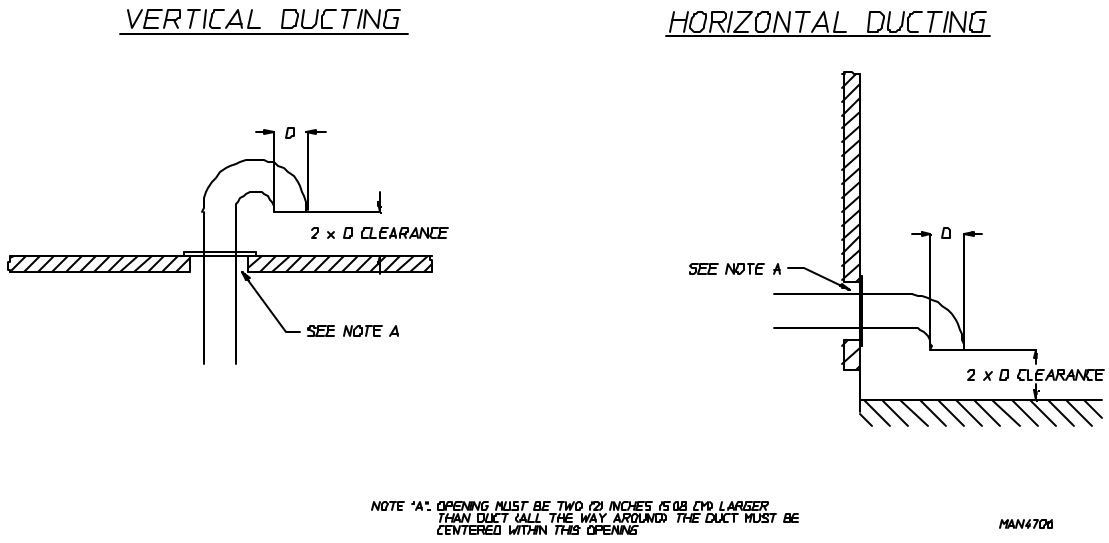
IMPORTANT: Exhaust back pressure measured by a manometer in the exhaust duct ***must be*** no less than 0 and ***must not exceed*** 0.3 inches (0.74 mb) of water column (W.C.).

NOTE: When the exhaust ductwork passes through a wall, ceiling, or roof made of combustible materials, the opening ***must be*** 2-inches (5.08 cm) larger than the duct (all the way around). The duct ***must be*** centered within this opening.

a. Outside Ductwork Protection

1) To protect the outside end of the horizontal ductwork from the weather, a 90º elbow bent downward **should be** installed where the exhaust exits the building. If the ductwork travels vertically up through the roof, it **should be** protected from the weather by using a 180º turn to point the opening downward. In either case, allow at least twice the diameter of the duct opening and the nearest obstruction.

IMPORTANT: ***DO NOT*** use screens, louvers, or caps on the outside opening of the exhaust ductwork.


VERTICAL DUCTING
HORIZONTAL DUCTING
D
2 x D CLEARANCE
SEE NOTE A
D
SEE NOTE A
2 x D CLEARANCE
NOTE "A": OPENING MUST BE TWO (2) INCHES (5.08 CM) LARGER THAN DUCT (ALL THE WAY AROUND) THE DUCT MUST BE CENTERED WITHIN THIS OPENING
MAN4706

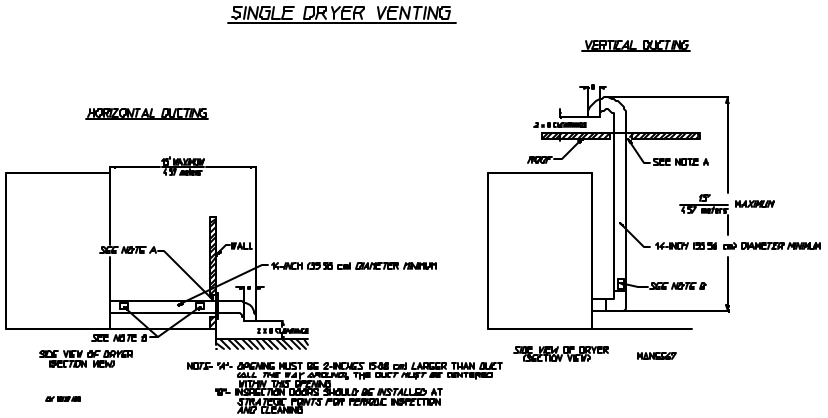
2. Single Dryer Venting

Where possible, it is suggested to provide a separate exhaust duct for each dryer. The exhaust duct **should be** laid out in such a way that the ductwork travels as directly as possible to the outdoors with as few turns as possible. It is suggested that the use of 90° turns in the ducting be avoided; use 30° and/or 45° angles instead. The shape of the exhaust ductwork is not critical so long as the minimum cross section area is provided.

IMPORTANT: For a dryer that is vented horizontally, the minimum duct size for a gas dryer is 14-inches (35.56 cm) for a round duct or 12-1/2" (31.75 cm) for a square duct. **THE DUCT SIZE *MUST NOT BE* REDUCED ANYWHERE DOWNSTREAM OF THE DRYER**.

IMPORTANT: Exhaust back pressure measured by a manometer at each basket (tumbler) exhaust duct area ***must be*** no less than 0 and ***must not exceed*** 0.3 inches (0.74 mb) of water column (W.C.).

It is suggested that the ductwork from each dryer not exceed 15 feet (4.57 meters) with no more than two (2) elbows (excluding dryer connections and outside exhaust outlets). If the ductwork exceeds 15 feet (4.57 meters) or has numerous elbows, the cross section area of the ductwork **must be** increased in proportion to the length and number of elbows in it. In calculating duct size, the cross section area of a square or rectangular duct **must be** increased by twenty percent (20%) for each additional 15 feet (4.57 meters). The diameter of a round exhaust duct **should be** increased ten percent (10%) for each additional 15 feet (4.57 meters). Each 90º elbow is equivalent to an additional 30 feet (9.14 meters), and each 45º elbow is equivalent to an additional 15 feet (4.57 meters).



IMPORTANT: For extended ductwork runs, the cross section area of the ductwork can only be increased to an extent. When the ductwork approaches the maximum limits noted in this manual, a professional heating, venting, and air conditioning (HVAC) firm ***should be*** consulted for proper venting information.

ALL ductwork **should be** smooth inside with no projections from sheet metal screws or other obstructions, which will collect lint. When adding ducts, the duct to be added should overlap the duct to which it is to be connected. **ALL** ductwork joints **must be** taped to prevent moisture and lint from escaping into the building. Inspection doors **should be** installed at strategic points in the exhaust ductwork for periodic inspection and cleaning of lint from the ductwork.

NOTE: When the exhaust ductwork passes through a wall, ceiling, or roof made of combustible materials, the opening ***must be*** 2-inches (5.08 cm) larger than the duct (all the way around). The duct ***must be*** centered within this opening.

a. Outside Ductwork Protection

1) To protect the outside end of the horizontal ductwork from the weather, a 90° elbow bent downward **should be** installed where the exhaust exits the building. If the ductwork travels vertically up through the roof, it **should be** protected from the weather by using a 180º turn to point the opening downward. In either case, allow at least twice the diameter of the duct between the duct opening and the nearest obstruction.

IMPORTANT: ***DO NOT*** use screens, louvers, or caps on the outside opening of the exhaust ductwork.

3. Multiple Dryer (Common) Venting

If it is not feasible to provide separate exhaust ducts for each dryer, ducts from individual dryers may be channeled into a "common main duct." The individual ducts should enter the bottom or side of the main duct at an angle not more than 45º in the direction of airflow and **should be** spaced at least 38-1/4" (97.15 cm) apart. The main duct **should be** tapered, with the diameter increasing before each individual duct (14-inch [35.56 cm] minimum for gas models and 16-inch [40.64 cm] minimum for steam models) is added.

IMPORTANT: No more than four (4) dryers ***should be*** connected to one (1) main common duct.

The main duct may be any shape so long as the minimum cross-sectional area is provided. The **illustration** on **page 18** shows the minimum cross section area for multiple dryer round or square venting. These figures **must be** increased 10 square inches (64.52 squares centimeters) when rectangular main ducting is used, and the ratio of duct width to depth **should not be** greater than 3-1/2 to 1. These figures **must be** increased in proportion if the main duct run to the last dryer to where it exhausts to the outdoors is unusually long (over 15 feet [4.57 meters]) or has numerous (more than two [2]) elbows in it. In calculating ductwork size, the cross section area of a square or rectangular duct **must be** increased twenty percent (20%) for each additional 15 feet (4.57 meters). The diameter of a round exhaust **must be** increased ten percent (10%) for each additional 15 feet (4.57 meters). Each 90º elbow is equivalent to an additional 30 feet (9.14 meters) and each 45º elbow is equivalent to an additional 15 feet (4.57 meters).

IMPORTANT: For extended ductwork runs, the cross section area of the ductwork can only be increased to an extent. Maximum proportional ductwork runs, **cannot** exceed 15 feet (4.57 meters) more than the original limitations of 15 feet (4.57 meters) with two (2) elbows. When the ductwork approaches the maximum limits as noted in this manual, a professional heating, venting, and air conditioning (HVAC) firm ***should be*** consulted for proper venting information.

IMPORTANT: Exhaust back pressure measured by a manometer at each dryer exhaust duct area ***must be*** no less than 0 and ***must not exceed*** 0.3 inches (0.74 mb) of water column (W.C.).

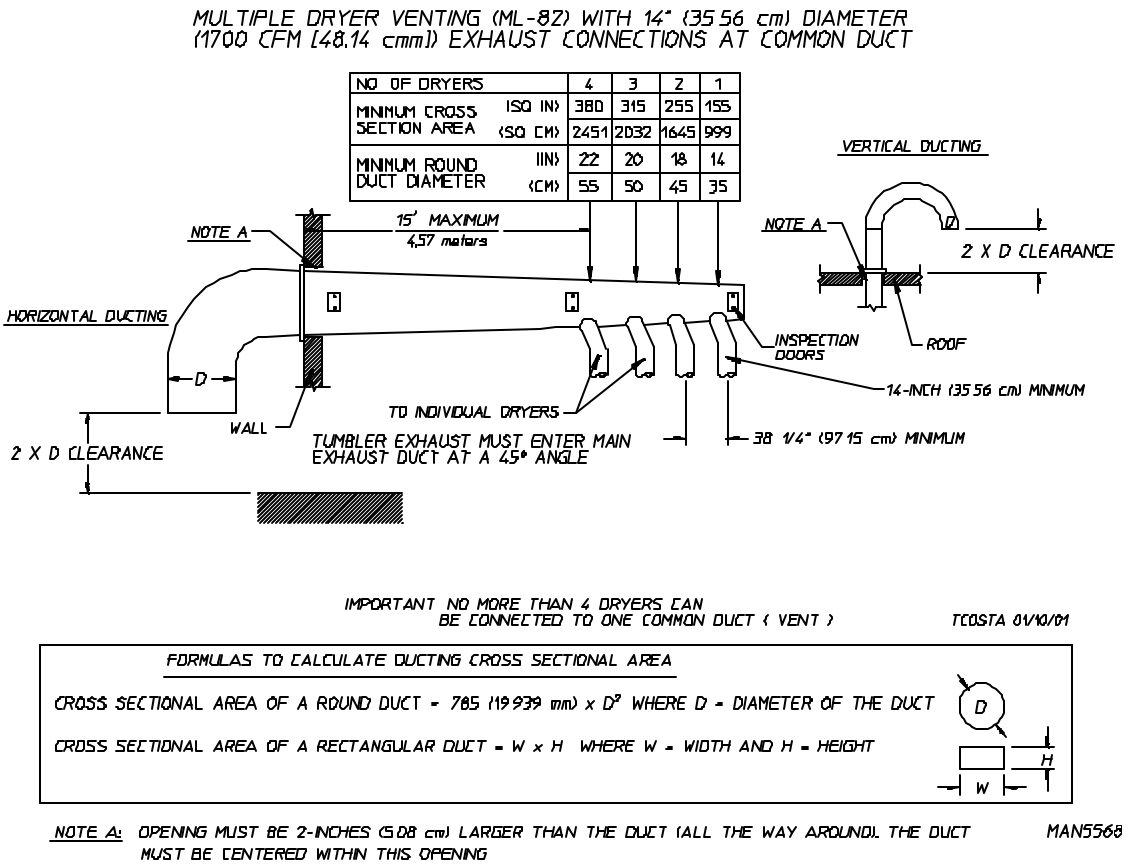
The ductwork **should be** smooth inside with projections from sheet metal screws or other obstructions, which will collect lint. When adding ducts, the duct to be added should overlap the duct to which it is to be connected. **ALL** ductwork joints **must be** taped to prevent moisture and lint from escaping into the building. Inspection doors **should be** installed at strategic points in the exhaust ductwork for periodic inspection and cleaning of lint from the ductwork.

NOTE: When the exhaust ductwork passes through a wall, ceiling, or roof made of combustible materials, the opening ***must be*** 2-inches (5.08 cm) larger than the duct (all the way around). The duct ***must be*** centered within this opening.

a. Outside Ductwork Protection

1) To protect the outside end of the horizontal ductwork from the weather, a 90º elbow bent downward **should be** installed where the exhaust exits the building. If the exhaust ductwork travels vertically up through the roof, it **should be** protected from the weather by using a 180º turn to point the opening downward. In either case, allow at least twice the diameter of the duct between the duct opening and nearest obstruction.

IMPORTANT: ***DO NOT*** use screens, louvers, or caps on the outside opening of the exhaust ductwork.


MULTIPLE DRYER VENTING (ML-82) WITH 14" (35.56 cm) DIAMETER
(1700 CFM [48.14 cmm]) EXHAUST CONNECTIONS AT COMMON DUCT
NO. OF DRYERS 4 3 2 1
MINIMUM CROSS SECTION AREA (SQ. IN.) 380 315 255 155
(SQ. CM.) 2451 2032 1645 999
MINIMUM ROUND DUCT DIAMETER (IN.) 22 20 18 14
(CM.) 55 50 45 35
VERTICAL DUCTING
NOTE A
15' MAXIMUM
4.57 meters
NOTE A
D
2 X D CLEARANCE
HORIZONTAL DUCTING
INSPECTION DOORS
ROOF
D
14-INCH (35.56 cm) MINIMUM
TO INDIVIDUAL DRYERS
WALL
TUMBLER EXHAUST MUST ENTER MAIN EXHAUST DUCT AT A 45° ANGLE
38 1/4" (97.15 cm) MINIMUM
2 X D CLEARANCE
IMPORTANT NO MORE THAN 4 DRYERS CAN BE CONNECTED TO ONE COMMON DUCT (VENT)
TCOSTA 01/10/01
FORMULAS TO CALCULATE DUCTING CROSS SECTIONAL AREA
CROSS SECTIONAL AREA OF A ROUND DUCT = .785 (.19939 mm) x D² WHERE D = DIAMETER OF THE DUCT
CROSS SECTIONAL AREA OF A RECTANGULAR DUCT = W x H WHERE W = WIDTH AND H = HEIGHT
D
H
W
NOTE A: OPENING MUST BE 2-INCHES (5.08 cm) LARGER THAN THE DUCT (ALL THE WAY AROUND). THE DUCT MUST BE CENTERED WITHIN THIS OPENING
MAN5568

F. ELECTRICAL INFORMATION

1. Electrical Requirements

It is your responsibility to have **ALL** electrical connections made by a properly licensed and competent electrician to assure that the electrical installation is adequate and conforms to local and state regulations or codes. In the absence of such codes, **ALL** electrical connections, materials, and workmanship **must conform** to the applicable requirements of the National Electrical Code ANSI/NFPA NO. 70-LATEST EDITION or in Canada, the Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or LATEST EDITION.

IMPORTANT: Failure to comply with these codes or ordinances, and/or the requirements stipulated in this manual can result in personal injury or component failure.

NOTE: Component failure due to improper installation will VOID THE WARRANTY.

Each dryer **should be** connected to an independently protected branch circuit. The dryer **must be** connected with copper wire only. ***DO NOT use aluminum wire, which could cause a fire hazard.*** The copper conductor wire/cable **must be** of proper ampacity and insulation in accordance with electric codes for making **ALL** service connections.

NOTE: The use of aluminum wire will VOID THE WARRANTY.

IMPORTANT: A separate circuit servicing each dryer ***must be*** provided.

2. Electrical Service Specifications

MLG-82 II (Gas)
MLS-82 II (Steam)

ELECTRIC SERVICE SPECIFICATIONS (PER DRYER)

IMPORTANT: 208 VAC and 240 VAC **ARE NOT THE SAME. When ordering, *specify exact voltage*.**

NOTES: A. Circuit breakers are thermal/magnetic (industrial) motor curve type **ONLY**. For others, calculate/verify correct breaker size according to appliance amp draw rating and type of breaker used.
B. Circuit breakers for 3-Phase (3ø) dryers **must be** 3-pole type.

SERVICE VOLTAGE	PHASE	WIRE SERVICE	APPROX. AMP DRAW		MINIMUM WIRE SIZE	CIRCUIT BREAKER AMPERAGE**	
			60 Hz	50 Hz		60 Hz	50 Hz
208	3ø	3/4	12.4	--	*	20	--
240	3ø	3	12.4	16.4	*	20	25
380-400	3ø	3/4	--	7.7	*	--	15
416	3ø	3/4	--	8.1	*	--	15
460/480	3ø	3/4	6.7	--	*	15	--

050801RS

* AWG Stranded Wire Type...size wire as per National Electrical Code or local codes.
** **IMPORTANT:** In cases where fuses are used of the dual element type, time delay, current limit, class RK1 or RK5 ONLY.

IMPORTANT: The dryer ***must be*** connected to the electric supply shown on the data label that is affixed to the upper left side panel area behind the top control (access) door. In the case of 208 VAC or 240 VAC, the supply voltage must match the electric service specifications of the data label **exactly**.

IMPORTANT: The wire size ***must be*** properly sized to handle the related current.

WARNING: 208 VAC AND 240 VAC ARE NOT THE SAME. Any damage done to dryer components due to improper voltage connections will automatically VOID THE WARRANTY.

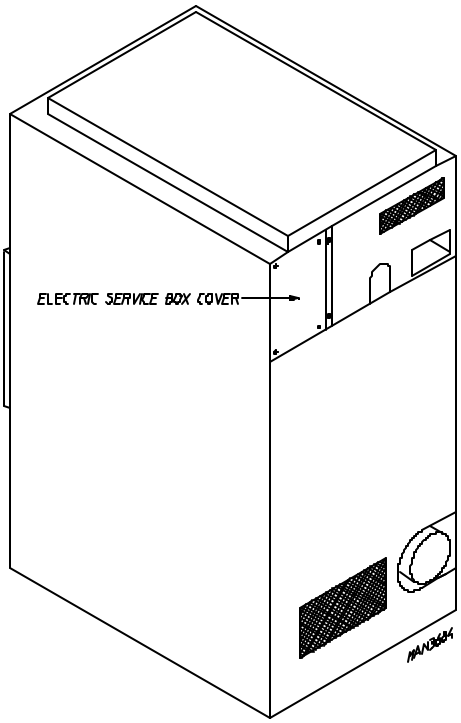
NOTE: ADC reserves the right to make changes in specifications at any time without notice or obligation.

3. Electrical Connections

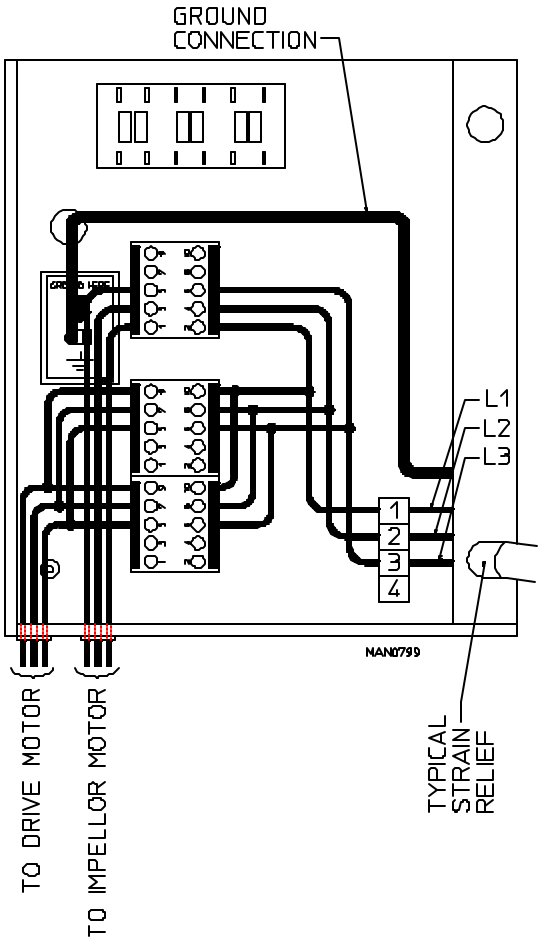
NOTE: A wire diagram is located in the front electrical control box for connection data.

a. Gas Models and Steam Models Only

NOTE: A CIRCUIT SERVICING EACH DRYER *MUST BE* PROVIDED.



For gas and steam dryers manufactured for operation at 3-phase (3ø), the electrical connections are made at the power distribution block located in the service box at the rear, upper left hand corner of the dryer. To gain access to the service box and contactor, the service box cover **must be** removed.



Providing local codes permit, power to the dryer can be made by the use of a flexible U.L. listed cord or pigtail (wire size **must conform** to the rating of the dryer), or the dryer can be hard wired directly to the service breaker. In **ALL** cases, a strain relief **should be** used both where the wiring enters the dryer and the service box.

G. GAS INFORMATION

It is your responsibility to have **ALL** plumbing connections made by a qualified professional to assure that the gas plumbing installation is adequate and conforms to local and state regulations or codes. In the absence of such codes, **ALL** plumbing connections, materials, and workmanship **must conform** to the applicable requirements of the National Fuel Gas Code ANSI Z223.1-LATEST EDITION, or in Canada, the Canadian Installation Codes CAN/CGA-B149.1-M91 (Natural Gas) or CAN/CGA-B149.2-M91 (L.P. Gas) or LATEST EDITION.

IMPORTANT: Failure to comply with these codes or ordinances, or the requirements stipulated in this manual, can result in personal injury and improper operation of the dryer.

The dryer and its individual shutoff valve **must be** disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa). The dryer **must be** isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).

IMPORTANT: Failure to isolate or disconnect dryer from supply as noted can cause irreparable damage to the gas valves VOIDING THE WARRANTY.

WARNING: FIRE OR EXPLOSION COULD RESULT.

1. Gas Supply

   The gas dryer installation **must meet** the American National Standard...National Fuel Gas Code ANSI Z223.1-LATEST EDITION, or in Canada, the Canadian Installation Codes CAN/CGA-B149.1 M91 (Natural Gas) or CAN/CGA-B149.2-M91 (L.P. Gas) or LATEST EDITION, as well as local codes and ordinances and **must be** done by a qualified professional.

NOTE: Undersized gas piping will result in ignition problems, slow drying, increased use of energy, and can create a safety hazard.

The dryer **must be** connected to the type of heat or gas indicated on the dryer data label affixed to the upper left side panel area behind the top control (access) door. If this information does not agree with the type of gas available, ***DO NOT operate dryer***. Contact the reseller who sold the dryer or contact the **ADC** factory.

IMPORTANT: Any burner changes or conversions ***must be*** made by a qualified professional.

The input rating shown on the dryer data label is for elevations of up to 2,000 feet (609.6 meters), unless elevation requirements of over 2,000 feet (609.6 meters) were specified at the time the dryer order was placed with the factory. The adjustment or conversion of dryers in the field for elevations over 2,000 feet (609.6 meters) is made by changing each burner orifice. If this conversion is necessary, contact the reseller who sold the dryer or contact the **ADC** factory.

2. Technical Gas Data

a. Gas Specifications

	TYPE OF GAS			
	NATURAL		LIQUID PROPANE	
Manifold Pressure*	3.5 inches W.C.	**8.7 mb**	10.5 inches W.C.	**26.1 mb**
In-Line Pressure	6.0 - 12.0 inches W.C.	**14.92 - 29.9 mb**	11.0 inches W.C.	**27.4 mb**

Shaded areas are stated in metric equivalents

* Measured at gas valve pressure tap when gas valve is on.

b. Gas Connections

Inlet connection --- 1-inch N.P.T.
Inlet supply size --- 1-inch N.P.T. (minimum)
BTU/hr input ------ 270,000 (68,040 kcal/hr)

1) Natural Gas

Regulation is controlled by the dryer's gas valve's internal regulator. Incoming supply pressure **must be** consistent between a minimum of 6.0 inches (14.92 mb) and a maximum of 12.0 inches (29.9 mb) water column (W.C.) pressure.

2) Liquid Propane (L.P.) Gas

Dryers made for use with L.P. gas have the gas valve's internal pressure regulator blocked open so that the gas pressure **must be** regulated upstream of the dryer. The pressure measured at each gas valve pressure tap **must be** a consistent 10.5 inches (26.1 mb) water column. There is no regulator or regulation provided in an L.P. dryer. The water column pressure **must be** regulated at the source (L.P. tank) or an external regulator **must be** added to each dryer.

			TYPE OF GAS						Liquid Propane Conversion Kit Part Number
MODEL NUMBER	BTU Per Hour Rating	**kcal/hr Rating**	Natural			Liquid Propane			
			Qty.	D.M.S.*	Part Number	Qty.	D.M.S.*	Part Number	
MLG-82	270,000	**68,040**	4	#23	140856	4	#41	140811	882119

Shaded area is stated in metric equivalent

* Drill Material Size (D.M.S.) equivalents are as follows:

Natural Gas ..... #23 = 0.154" (3.9116 mm).
Liquid Propane Gas ..... #41 = 0.096" (2.4384 mm).

3. Piping and Connections

ALL components/materials **must conform** to National Fuel Gas Code Specifications ANSI Z223.1-LATEST EDITION, or in Canada, CAN/CGA-B149.1-M91 (Natural Gas) or CAN/CGA-B149.2-M91 (Liquid Propane [L.P.] Gas) or LATEST EDITION (for General Installation and Gas Plumbing), as well as local codes and ordinances and **must be** done by a qualified professional. It is important that gas pressure regulators meet applicable pressure requirements, and that gas meters be rated for the total amount of **ALL** the appliance BTUs being supplied.

The dryer is provided with a 1-inch N.P.T. inlet pipe connection extending out the back area of the burner box. The minimum pipe size connection (supply line) to the dryer is 1-inch N.P.T. For ease of servicing, the gas supply line of each dryer must have its own shutoff valve.

The size of the main gas supply line (header) will vary depending on the distance this line travels from the gas meter or, in the case of L.P. gas, the supply tank, other gas-operated appliances on the same supply line, etc. Specific information regarding supply line size **should be** determined by the gas supplier.

NOTE: Undersized gas supply piping can create a low or inconsistent pressure, which will result in erratic operation of the burner ignition system.

Consistent gas pressure is essential at **ALL** gas connections. It is recommended that a 1-inch (2.54 cm) pipe gas loop be installed in the supply line servicing a bank of dryers. An in-line pressure regulator **must be** installed in the gas supply line (header) if the (natural) gas pressure exceeds 12.0 inches (29.9 mb) of water column (W.C.) pressure.

IMPORTANT: A consistent water column pressure of 3.5 inches (8.7 mb) for natural gas and 10.5 inches (26.1 mb) for L.P. dryers is required at the gas valve pressure tap of each dryer for proper and safe operation.

An 1/8-inch N.P.T. plugged tap, accessible for a test gauge connection, **must be** installed in the main gas supply line immediately upstream of each dryer.

IMPORTANT: Pipe joint compounds that resist the action of natural and L.P. gases ***must be*** used.

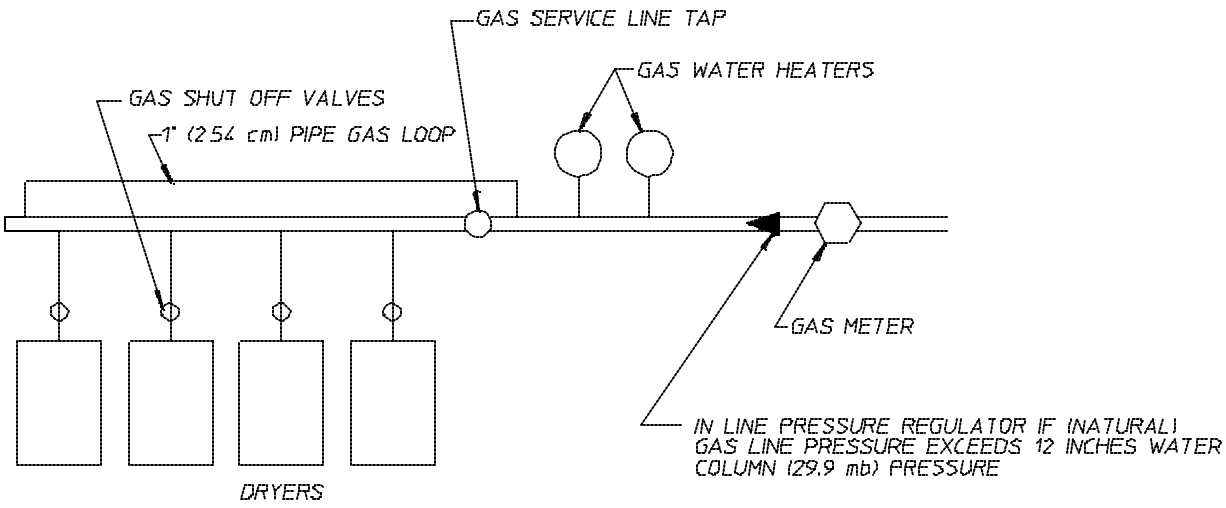
WARNING: NEVER TEST FOR GAS LEAKS WITH A FLAME!!!

ALL components and materials **must conform** to National Fuel Gas Code Specifications ANSI Z223.1-LATEST EDITION, or in Canada, the Canadian Gas Code specifications. It is important that gas pressure regulators meet applicable pressure requirements and that gas meters be rated for the total amount of **ALL** the appliance BTUs being supplied.

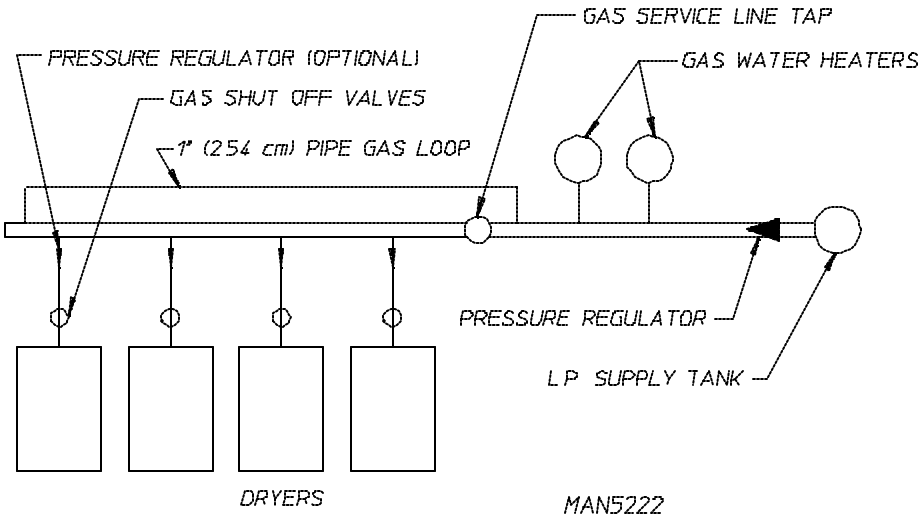
IMPORTANT: The dryer and its individual shutoff valve ***must be*** disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).

NOTE: The dryer ***must be*** isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).

TYPICAL NATURAL GAS INSTALLATION


GAS SERVICE LINE TAP
GAS WATER HEATERS
GAS SHUT OFF VALVES
1" (2.54 cm) PIPE GAS LOOP
GAS METER
IN LINE PRESSURE REGULATOR IF (NATURAL) GAS LINE PRESSURE EXCEEDS 12 INCHES WATER COLUMN (29.9 mb) PRESSURE
DRYERS

TYPICAL L.P GAS INSTALLATION



MAN5222

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H. STEAM INFORMATION

It is your responsibility to have **ALL** steam plumbing connections made by a qualified professional to assure that the installation is adequate and conforms to local and state regulations or codes.

IMPORTANT: Failure to comply with the requirements stipulated in this manual can result in component failure, which will VOID THE WARRANTY.

NOTE: The ML-82 II is manufactured with a pneumatic (piston) damper system, which requires an external supply of clean, dry, and regulated air (80 PSI +/- 10 PSI [5.51 bars +/- 0.68 bars]). Refer to **Steam Damper Air System Connections**, **Section H, item 3.**

IMPORTANT: STEAM PH LEVEL – The normal PH level for copper type steam coils ***must be*** maintained between a value of 8.5 to 9.5. For steel type steam coils, the PH level ***must be*** maintained between a value of 9.5 and 10.5. These limits are set to limit the acid attack of the steam coils.

NOTE: Coil failure due to improper PH level will VOID THE WARRANTY.

1. Steam Requirements, High Pressure

   a. Inlet ------ 1-inch supply line connection – qty. one (1) at top manifold.

   b. Return --- 1-inch return line connection – qty. one (1) at bottom manifold.

Operating Steam Pressure		
Maximum	125 psig	**861.84 kPa**
Minimum	100 psig*	**689.47 kPa**
Heat Input (Normal Load)	11 Bhp	
Consumption (Approximate)	375 lbs/hr	**170.5 kg/hr**

Shaded areas are stated in metric equivalents

* Minimum operating pressure for optimum results.

2. Installation Instructions

   To ensure an adequate supply of steam is provided, be sure that the steam supply and steam return lines are sized and laid out as stipulated in this manual. Inadequate steam supply and steam return lines or improper steam plumbing will result in poor performance and can cause component failure. Clean, dry, and regulated steam **must be** provided to the dryer.

IMPORTANT: Steam coil failure due to water hammer by wet steam VOIDS THE WARRANTY.

   a. The pressure of the condensate in the steam supply will cause water hammer and subsequent heat exchanger (steam coil) failure. The steam supply connection into the main supply line **must be** made with a minimum 12-inch (30.48 cm) riser. This will prevent any condensate from draining towards the dryer.

b. The steam supply piping to the dryer must include a 12-inch (30.48 cm) riser along with a drip trap and check valve. This will prevent any condensate from entering the steam coil.

c. Flexible hoses or couplings **must be** used. The dryer vibrates slightly when it runs and this will cause the steam coil connections to crack if they are hard piped to the supply and return mains.

d. Shutoff valves for each dryer **should be** installed in the supply, return, and drip trap return lines. This will allow the dryer to be isolated from the supply and return mains if the dryer needs maintenance work.

e. Install an inverted bucket steam trap and check valve for each unit at least 12-inches (30.48 cm) below steam coil as close to the coil as possible.

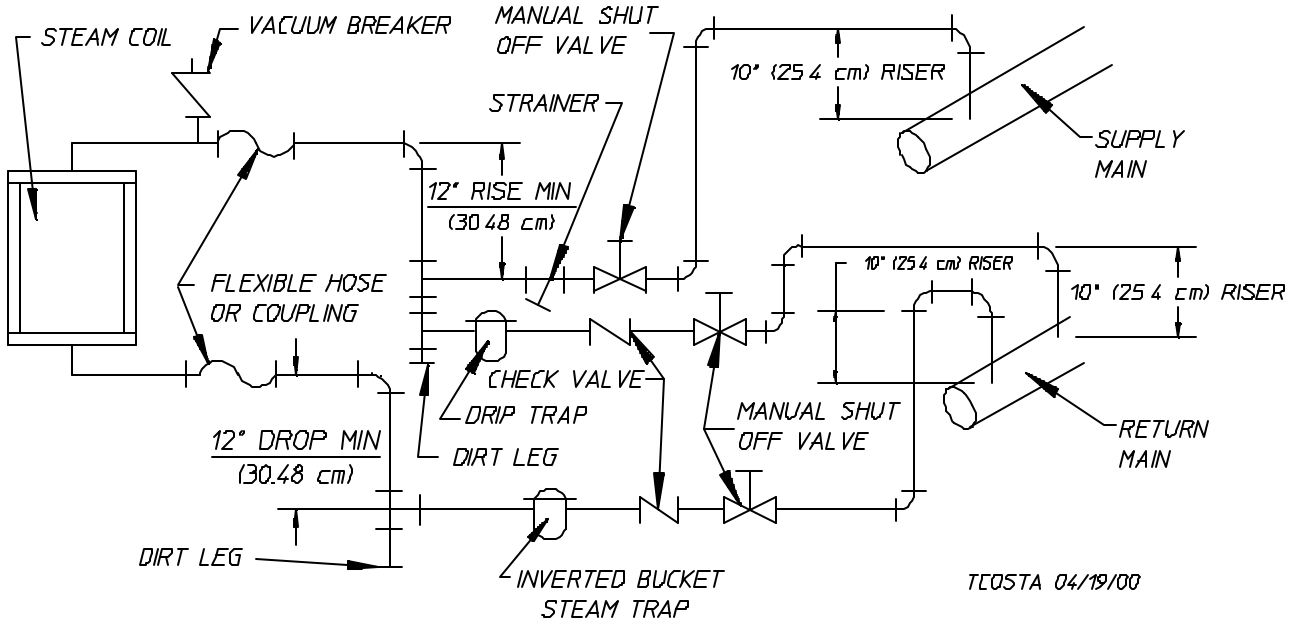
   1) A trap with a capacity of 1,000 lbs (454 kg) of condensate per hour at 125 PSI (8.62 bars) is needed for each unit.

f. A 3/4-inch (19.05 mm) vacuum breaker **should be** installed for each unit in the piping. This will prevent the condensing steam from causing a vacuum inside the coil and possibly damaging the coil.

g. The supply and return lines **should be** insulated. This will save energy and provide for the safety of the operator and maintenance personnel.

h. Water pockets in the supply line, caused by low points, will provide wet steam to the coil possibly causing coil damage. **ALL** horizontal runs of steam supply piping **should be** pitched 1/4-inch (6.35 mm) for every 1 foot (0.30 meters) back toward the steam supply header causing any condensate in the line to drain to the header. Install a bypass trap in any low point to eliminate wet steam.

IMPORTANT: Flexible hose and couplings ***must be*** used. Coil failure due to hard plumbing connections will VOID THE WARRANTY.



STEAM DAMPER SYSTEM MAN5221

3. Steam Damper Air System Connections

The MLS-82 II is manufactured with a pneumatic (piston) damper system, which requires an external supply of compressed air. The air connection is made to the steam damper solenoid valve, which is located at the rear inner top area of the dryer just above the electric service relay box.

a. Air Requirements

Compressed Air Supply	Air Pressure	
Normal	80 PSI	**5.51 bars**
Minimum Supply	70 PSI	**4.82 bars**
Maximum Supply	90 PSI	**6.20 bars**

Shaded areas are stated in metric equivalents

b. Air Connection

Air connection to system --- 1/8-inch N.P.T.

c. Air Regulation

No air regulation or filtration is provided with the dryer. External regulation and filtration of 80 PSI (5.51 bars) **must be** provided. It is suggested that a regulator or filter gauge arrangement be added to the compressed air line just before the dryer connection. This is necessary to ensure that correct and clean air pressure is achieved.

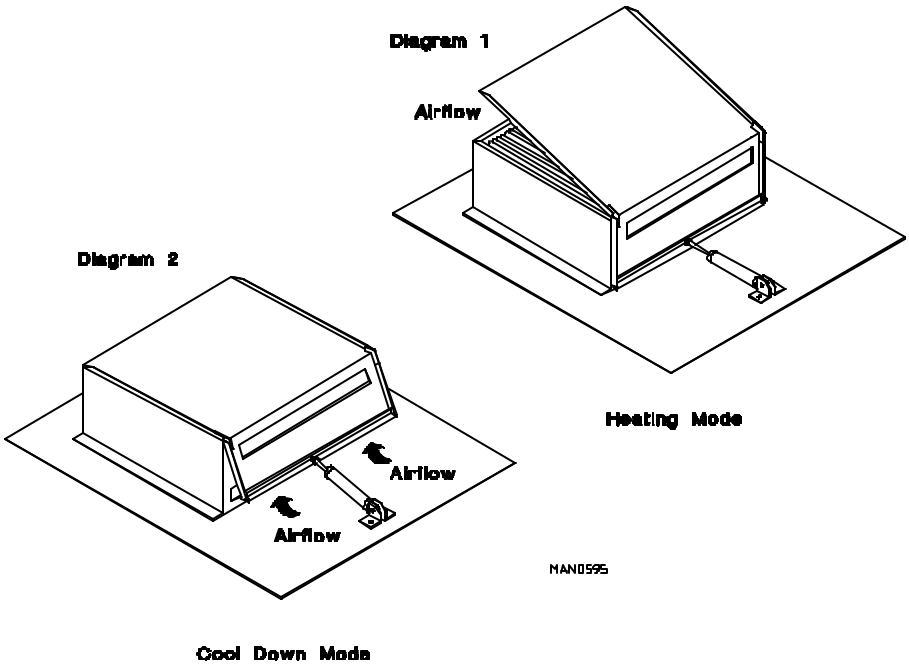
4. Steam Damper System Operation

The MLS-82 II steam damper, as shown in the **top illustration** on **page 29** allows the coil to stay constantly charged eliminating repeated expansion and contraction. When the damper is opened, the air immediately passes through the already hot coil, providing instant heat to start the drying process. When the damper is closed, ambient air is drawn directly into the basket (tumbler), allowing a rapid cool down.

Diagram 1 shows the damper in the heating (open) mode, allowing heat into the basket (tumbler).

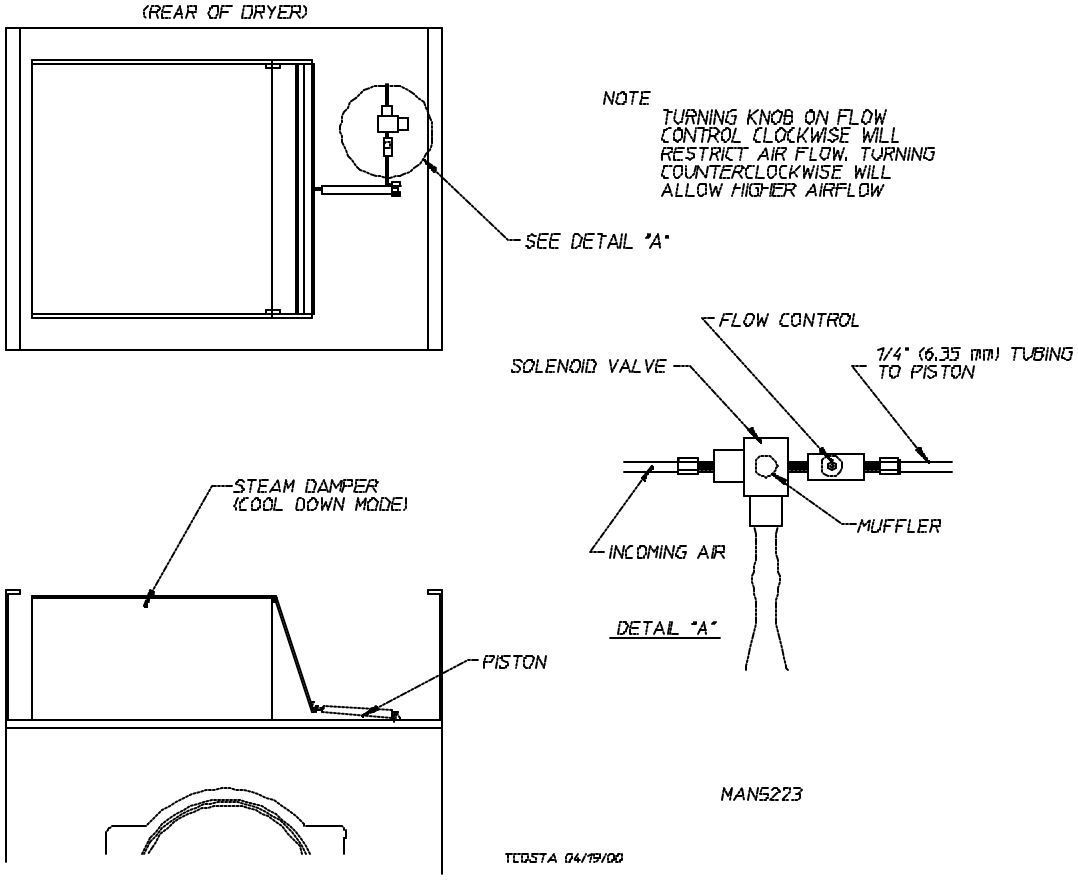
Diagram 2 shows the damper in the cool down (closed) mode, pulling ambient air directly into the basket (tumbler) without passing through the coils.

NOTE: With the dryer off or with no air supply, the damper is in the cool down mode as shown in Diagram 2.



5. Steam Damper Air Piston (Flow Control) Operation Adjustment

Although the damper operation was tested and adjusted prior to shipping at 80 PSI (5.51 bars), steam damper operation **must be** checked before the dryer is put into operation. Refer to **page 31** for instructions to check steam damper operation. If damper air adjustment is necessary, locate flow control valve and make necessary adjustments as noted below.



I. PREPARATION FOR OPERATION/START-UP

The following items **should be** checked before attempting to operate the dryer:

1. Read **ALL** "**CAUTION**," "**WARNING**," and "**DIRECTION**" labels attached to the dryer.

2. Check incoming supply voltage to be sure that it is the same as indicated on the dryer data label affixed to the upper left side panel area behind the top control (access) door. In the case of 208 VAC or 230/240 VAC, ***THE SUPPLY VOLTAGE MUST MATCH THE ELECTRIC SERVICE EXACTLY***.

3. **GAS MODELS** - Check to assure that the dryer is connected to the type of heat/gas indicated on the dryer data label.

4. **GAS MODELS** - The sail switch damper assembly was installed and adjusted at the factory prior to shipping. However, each sail switch adjustment **must be** checked to assure that this important safety control is functioning. (Refer to **page 32** for Sail Switch Adjustment).

5. **GAS MODELS** - Be sure that **ALL** gas shutoff valves are in the open position.

6. Be sure **ALL** side and base panels are on the dryer.

7. Check **ALL** service doors to insure that they are closed and secure.

8. Be sure the lint drawer/door is securely in place.

9. Rotate the basket (tumbler/drum) by hand to be sure it moves freely.

10. Check bolts, nuts, screws, terminals, and fittings for security.

11. **STEAM MODELS** - Check to insure air supply (80 PSI [5.51 bars]) is connected to the dryers.

12. **STEAM MODELS** - Check to insure **ALL** steam shutoff valves are open.

13. **STEAM MODELS** - Check steam damper operation.

14. Check basket (tumbler) bearing setscrews to insure they are **ALL** tight.

J. PREOPERATIONAL TESTS

ALL dryers are thoroughly tested and inspected before leaving the factory. However, a preoperational test **should be** performed before the dryer is publicly used. It is possible that adjustments have changed in transit or due to marginal location (installation) conditions.

1. Turn on electric power to the dryer.

   a. Open **ALL** shutoff valves (gas models only).

2. Refer to the Operating Instructions for starting your particular model dryer.

3. Gas Dryers

   a. When a gas dryer is first started (during initial start-up), it has a tendency not to ignite on the first ignition attempt. This is because the gas supply piping is filled with air, so it may take a few minutes for the air to be purged from the lines.

NOTE: During the purging period, check to be sure that **ALL** gas shutoff valves are open.

NOTE: Gas dryers are equipped with a Direct Spark Ignition (DSI) system, which has internal diagnostics. If ignition **is not** established within three (3) times, the heat circuit in the DSI module will lockout until it is manually reset. To reset the DSI system, open and close the main door and restart the dryer.

   b. A gas pressure test **should be** taken at the gas valve pressure tap of each dryer to assure that the water column (W.C.) pressure is correct and consistent.

NOTE: Water column pressure requirements (measured at the pressure tap of the gas valve body):

Natural Gas ---------- 3.5 Inches (8.7 mb) Water Column.
Liquid Propane (L.P.) Gas --------- 10.5 Inches (26.1 mb) Water Column.

IMPORTANT: There is no regulator provided in an L.P. dryer. The water column pressure ***must be*** regulated at the source (L.P. tank), or an external regulator ***must be*** added to each dryer.

4. Steam Dryers

   a. Check to insure that steam damper is functioning properly.

      1) The steam damper should not "slam" (open or closed) when it reaches the end of (piston) travel. Additionally, the steam damper should not bind and/or stop during travel. If either of these conditions occur, the flow control **must be** adjusted. Refer to the **bottom illustration** on **page 29** for air adjustment instructions.

5. Make a complete operational check of **ALL** safety related circuits:

    a. Door switch(es)

    b. Hi-Limit thermostats

    c. Sail switch (for gas models only)

NOTE: To check for proper sail switch operation (for gas models only), open the main door and while holding main door switch plunger in, start dryer. Dryer should start but heat circuit ***should not be*** activated (on). If the heat system is activated, the sail switch is improperly adjusted and ***must be*** adjusted by bending the actuator arm of the sail switch toward the burner box. If the actuator arm is bent too far toward the burner box of the dryer, the dryer may not have heat when needed. After any adjustment to the sail switch, the above procedure ***must be*** repeated to verify proper operation of the sail switch.

6. The dryer **should be** operated through one (1) complete cycle to assure that no further adjustments are necessary and that **ALL** components are functioning properly.

BASKET COATING

The basket (tumbler) is treated with a protective coating. We suggest dampening old garments or cloth material with a solution of water and nonflammable mild detergent and tumbling them in the basket (tumbler) to remove this coating.

7. Make a complete operational check of **ALL** operating controls.

    a. Microprocessor controller (computer) programs/selections...

        1) Each microprocessor controller (computer) has been preprogrammed by the factory with the most commonly used parameter (program) selections. If computer program changes are required, refer to the computer programming manual, which was shipped with the dryer.

8. Check the electric service phase sequence (3-phase [3ø] models only). While the dryer is operating, check to see if the blower wheel (impellor/fan) is rotating in the proper direction. Looking from the front, the blower wheel (impellor/fan) should spin in the clockwise (CW) direction. If it is, the phasing is correct. If the phasing is incorrect, reverse two (2) of the three (3) leads at connections L1, L2, and L3 of the power supply to the dryer.

IMPORTANT: If the blower wheel (impellor/fan) is rotating in the wrong direction, this **will not** only drastically reduce drying efficiency, but it can also cause premature component failure.

9. REVERSING MODELS ONLY - Basket (tumbler) dryer **should never be** operated with less than a 30 lb (13.7 kg) load (dry weight). The size of the load will affect the coast-down and dwell (stop) times. The basket (tumbler) must come to a complete stop before starting in opposite direction.

    a. Microprocessor Models

        1) Spin and stop <u>are</u> <u>not</u> adjustable in the Automatic Mode and have been preprogrammed into the microprocessor controller (computer) for a 150-second spin time in forward direction, 120-seconds in the reverse direction and a 5-second dwell (stop) time.

        2) Spin and stop times are adjustable in the Manual (timed) Mode.

10. Check to insure that **<u>ALL</u>** setscrews (i.e., basket [tumbler] drive, idler, etc.) are tight.

K. PREOPERATIONAL INSTRUCTIONS

1. To start the dryer:

    a. Microprocessor Controller (Computer) Dryers

        1) The light emitting diode (L.E.D.) display will read "REAdY."

        2) Press the "E" on the keyboard (touch pad).

        3) The dryer will start and the display will flash "dRYING MANUAL CYCLE E," "dRY TEMP 180F," "COOL TEMP 80F," "30 REMAIN," "dRUM TEMP."

            Refer to the User's Manual for detailed operating instructions.

L. SHUT DOWN INSTRUCTIONS

If the dryer is to be shut down (taken out of service) for a period of time, the following **must be** performed:

1. Discontinue power to the dryer either at the external disconnect switch or the circuit breaker.

2. Discontinue the gas or steam supply:

    a. ***GAS MODELS*...discontinue the gas supply**.

        1) **SHUT OFF <u>external</u> gas supply shutoff valve**.

    b. ***STEAM MODELS*...discontinue the steam supply**.

        1) **SHUT OFF <u>external</u> (location furnished) shutoff valve**.

        2) **SHUT OFF <u>external</u> steam valves in the supply lines and the return lines**.

SECTION IV

SERVICE/PARTS INFORMATION

A. SERVICE

1. Service **must be** performed by a qualified trained technician, service agency, or gas supplier. If service is required, contact the reseller from whom the **ADC** equipment was purchased. If the reseller **cannot** be contacted or is unknown, contact the **ADC** Service Department for a reseller in your area.

NOTE: When contacting the **ADC** Service Department, be sure to give them the correct **model number** and **serial number** so that your inquiry is handled in an expeditious manner.

B. PARTS

1. Replacement parts **should be** purchased from the reseller from whom the **ADC** equipment was purchased. If the reseller **cannot** be contacted or is unknown, contact the **ADC** Parts Department for a reseller in your area. Parts may also be purchased directly from the factory by calling the **ADC** Parts Department at (508) 678-9000 or you may FAX in your order at (508) 678-9447.

NOTE: When ordering replacement parts from the **ADC** reseller or the **ADC** factory be sure to give them the correct **model number** and **serial number** so that your parts order can be processed in an expeditious manner.

SECTION V
WARRANTY INFORMATION

A. RETURNING WARRANTY CARDS

1. Before any dryer leaves the **ADC** factory test area, a warranty card is placed on the back side of the main door glass. These warranty cards are intended to serve the customer where we record the individual installation date and warranty information to better serve you should you file a warranty claim.

    a. If a warranty card did not come with your dryer, contact the **ADC** Warranty Department or the **ADC** Service Department at (508) 678-9000.

IMPORTANT: A separate warranty card ***must be*** completed and returned for each individual dryer.

NOTE: Be sure to include the installation date when returning the warranty card(s).

B. WARRANTY

For a copy of the **ADC** commercial warranty covering your particular dryer(s), contact the **ADC** reseller from whom you purchased the equipment and request a dryer warranty form. If the reseller **cannot** be contacted or is unknown, warranty information can be obtained from the factory by contacting the **ADC** Warranty Department at (508) 678-9000.

NOTE: Whenever contacting the **ADC** factory for warranty information, be sure to have the dryer's **model number** and **serial number** available so that your inquiry can be handled in an expeditious manner.

C. RETURNING WARRANTY PARTS

ALL dryer or parts warranty claims or inquires **should be** addressed to the **ADC** Warranty Parts Department. To expedite processing, the following procedures **must be** followed:

1. No parts are to be returned to **ADC** without prior written authorization ("Return Material Authorization" [R.M.A.]) from the factory.

NOTE: An R.M.A. is valid for only thirty (30) days from date of issue.

    a. The R.M.A. issued by the factory, as well as any other correspondence pertaining to the returned part(s), **must be** included inside the package with the failed merchandise.

2. Each part **must be** tagged with the following information:

   a. **Model number** and **serial number** of the dryer from which part was removed.

   b. Nature of failure (be specific).

   c. Date of dryer installation.

   d. Date of part failure.

   e. Specify whether the part(s) being returned is for a replacement, a credit, or a refund.

NOTE: If a part is marked for a credit or a refund, the invoice number covering the purchase of the replacement part ***must be*** provided.

NOTE: Warranty tags **(ADC** Part No. 450064) are available at "no charge" from **ADC** upon request.

3. The company returning the part(s) must clearly note the complete company name and address on the outside of the package.

4. **ALL** returns **must be** properly packaged to insure that they are not damaged in transit. *Damage claims are the responsibility of the shipper.*

IMPORTANT: No replacements, credits, or refunds **will be** issued for merchandise damaged in transit.

5. **ALL** returns **should be** shipped to the **ADC** factory in such a manner that they are insured and a proof of delivery can be obtained by the sender.

6. **Shipping charges are not the responsibility of ADC. ALL returns should be "prepaid" to the factory. Any "C.O.D." or "COLLECT" returns will not be accepted.**

IMPORTANT: No replacements, credits, or refunds **will be** issued if the claim **cannot** be processed due to insufficient information. The party filing the claim **will be** notified in writing, either by "FAX" or "CERTIFIED MAIL - Return Receipt Requested," as to the information necessary to process claim. If reply **is not** received by the **ADC** Warranty Department within thirty (30) days from the FAX/letter date, then no replacements, credits, or refunds **will be** issued, and the merchandise **will be** discarded.

SECTION VI
ROUTINE MAINTENANCE

A. CLEANING

A program or schedule **should be** established for periodic inspection, cleaning, and removal of lint from various areas of the dryer, as well as throughout the ductwork system. The frequency of cleaning can best be determined from experience at each location. Maximum operating efficiency is dependent upon proper air circulation. The accumulation of lint can restrict this airflow. If the guidelines in this section are met, an **ADC** dryer will provide many years of efficient, trouble-free, and most importantly, safe operation.

WARNING: LINT FROM MOST FABRICS IS HIGHLY COMBUSTIBLE. THE ACCUMULATION OF LINT CAN CREATE A POTENTIAL FIRE HAZARD.

WARNING: KEEP DRYER AREA CLEAR AND FREE FROM COMBUSTIBLE MATERIALS, GASOLINE, AND OTHER FLAMMABLE VAPORS AND LIQUIDS.

NOTE: Suggested time intervals shown are for average usage which is considered six (6) to eight (8) operational (running) hours per day.

IMPORTANT: Dryer produces combustible lint and ***must be*** exhausted to the outdoors. Every 6 months, inspect the exhaust ducting and remove any lint build up.

SUGGESTED CLEANING SCHEDULE

EVERY THIRD OR FOURTH LOAD

Clean the lint screen every third or fourth load. A clogged lint screen will cause poor dryer performance. The lint screen is located behind the lint door in the base of the dryer. Open the lint drawer, brush the lint off of the lint screen, and remove the lint. Inspect the lint screen and replace if torn.

NOTE: The frequency of cleaning the lint screens can best be determined from experience at each location.

WEEKLY

Clean lint accumulation from the lint chamber, thermostat, and microprocessor temperature sensor (sensor bracket) area.

WARNING: TO AVOID HAZARD OF ELECTRICAL SHOCK, DISCONTINUE ELECTRICAL POWER SUPPLY TO THE DRYER.

STEAM DRYERS

Clean the steam coil fins. Suggest using compressed air and a vacuum cleaner with brush attachment.

NOTE: When cleaning steam coil fins, be careful not to bend the fins. If the fins are bent, straighten by using a fin comb, which is available from any local air conditioning supply house.

90 DAYS

1. Remove lint from around basket (tumbler), drive motors, and surrounding areas.

2. Remove lint from gas valve burner area with a dusting brush or vacuum cleaner attachment.

3. Clean any lint accumulation in and around both the blower and drive motor casing openings.

EVERY 6 MONTHS

Inspect and remove lint accumulation in customer furnished exhaust ductwork system and from dryer's internal exhaust ducting.

NOTE: THE ACCUMULATION OF LINT IN THE EXHAUST DUCTWORK CAN CREATE A POTENTIAL FIRE HAZARD.

NOTE: ***DO NOT*** OBSTRUCT THE FLOW OF COMBUSTION AND VENTILATION AIR. CHECK CUSTOMER FURNISHED BACK DRAFT DAMPERS IN THE EXHAUST DUCTWORK. INSPECT AND REMOVE ANY LINT ACCUMULATION, WHICH CAN CAUSE THE DAMPER TO BIND OR STICK.

NOTE: A back draft damper that is sticking partially closed can result in slow drying and shut down of heat circuit safety switches or thermostats.

NOTE: When cleaning the dryer cabinets, avoid using harsh abrasives. A product intended for the cleaning of appliances is recommended.

B. ADJUSTMENTS

7 DAYS AFTER INSTALLATION AND EVERY 6 MONTHS THEREAFTER

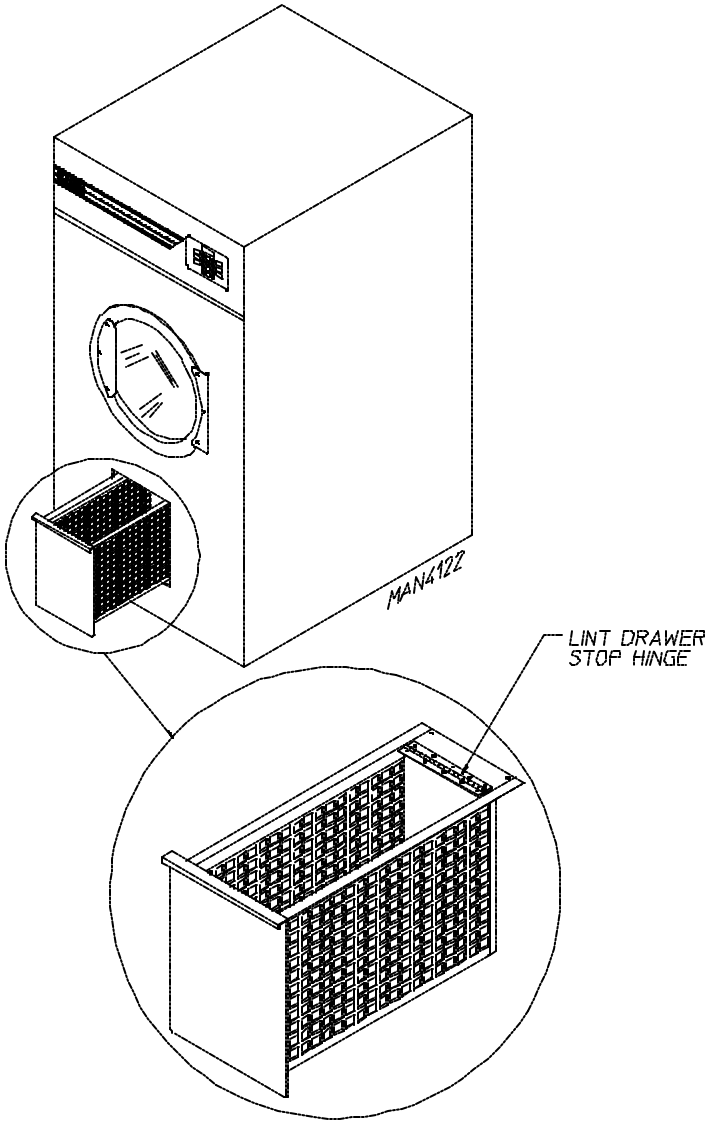
Inspect bolts, nuts, screws, (bearing setscrews), and nonpermanent gas connections (unions, shutoff valves, orifices, and grounding connections). Motor and drive belts **should be** examined. Cracked or seriously frayed belts **should be** replaced. Tighten loose V-belts when necessary. Complete operational check of controls and valves. Complete operational check of **ALL** safety devices (door switches, lint drawer switch, sail switch, burner and hi-limit thermostats).

C. LUBRICATION

The motor bearings and under normal/most conditions the basket (tumbler) and idler bearings are permanently lubricated. It is physically possible to re-lubricate the basket (tumbler) and idler bearings if you choose to do so even though this practice is not necessary. Use Shell Alvania #2 or its equivalent. The basket (tumbler) and idler bearings used in the dryer **DO NOT** have a grease fitting. Provisions are made in the bearing housing for the addition of a grease fitting which can be obtained elsewhere, or from **ADC** by ordering kit Part No. 882159 (basket [tumbler] only), which includes two (2) fittings.

D. LINT DRAWER REMOVAL

To remove the lint drawer from the dryer pull drawer out approximately half way. Rotate and move lint drawer stop hinge downward and pull drawer out. (Refer to the **illustration below**.)



IMPORTANT: After reinstalling the lint drawer back into the dryer, be sure to rotate/move the hinge back to the upward stop position.

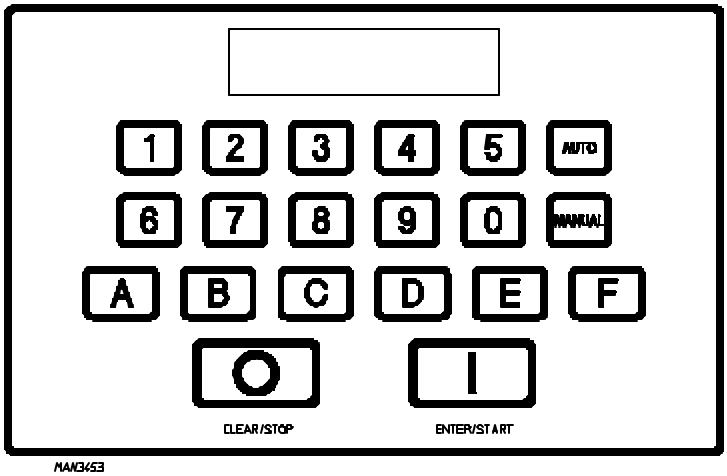
SECTION VII

PROCEDURE FOR FUNCTIONAL CHECK OF REPLACEMENT COMPONENTS

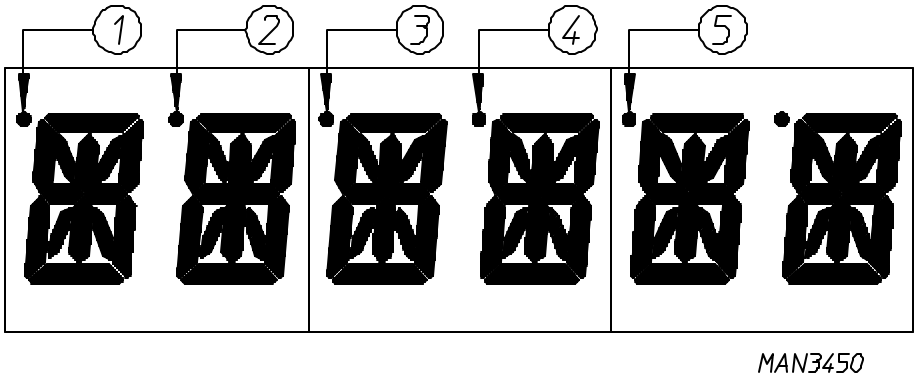
1. Microprocessor Controller (Computer) Board

   a. Upon completing installation of the replacement microprocessor controller (computer) board, reestablish power to the dryer.

   b. Start the drying cycle by pressing any of the preset cycles in letters A-F.



   c. Verify that the motor(s) and the heat indicator dots, in the microprocessor controller (computer) light emitting diode (L.E.D.) display are on. (Refer to the **illustration below**.)



   1) Basket (tumbler) in Forward Mode (clockwise [CW]) indicator

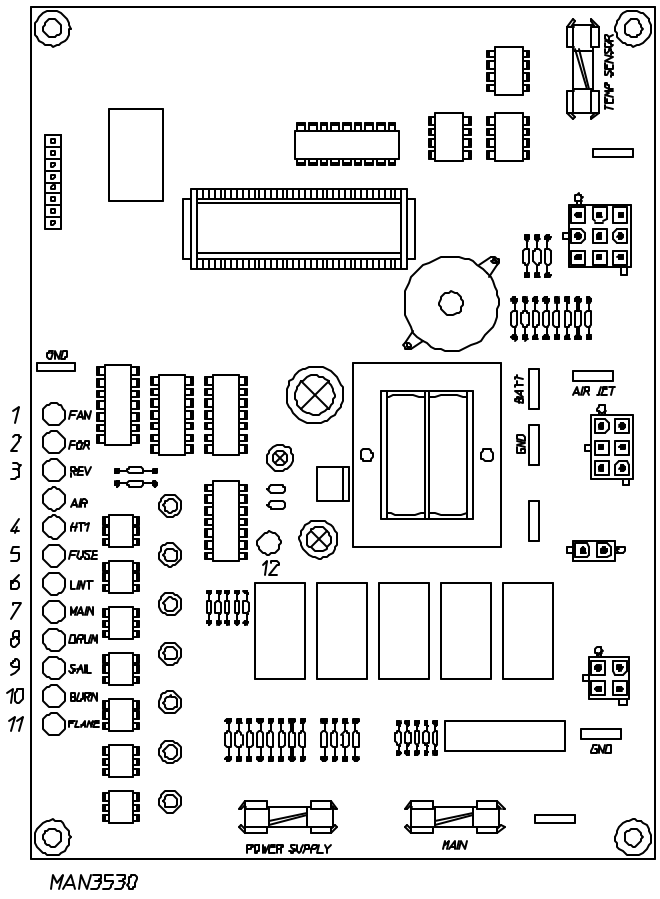
   2) Basket (tumbler) in Reverse Mode (counterclockwise [CCW]) indicator (for reversing models only)

   3) Heat On indicator

   4) On indicator (dryer is in operation mode)

   5) Air Jet indicator (for applicable models with optimal air jets)

d. Verify that the motor(s), heat, and door indicator lights on the back side of the microprocessor controller (computer) board are lit. (Refer to the **illustration below**.)



1) "FAN" (Blower) output light emitting diode (L.E.D.) indicator

2) "FOR" (Forward) output L.E.D. indicator (for optional reversing models only)

3) "Rev" (Reverse) output L.E.D. indicator (for optional reversing models only)

4) "HT 1" (Heat) output L.E.D. indicator

5) "Fuse" (Main Fuse) input L.E.D. indicator

6) "Lint" (Lint Door) input L.E.D. indicator

7) "Main" (Main Door) input L.E.D. indicator

8) "Drum" (Tumbler Hi-Limit) input L.E.D. indicator

9) "Sail" (Sail Switch) input L.E.D. indicator

10) "Burn" (Burner Hi-Limit) input L.E.D. indicator

11) "Flame" (Burner Control Failure) input L.E.D. indicator

12) "Power Supply" input L.E.D. indicator

e. Open main door. The dryer must stop and **ALL** output indicator lights on the back side of the microprocessor controller (computer) board must go out. (Refer to the **illustration** on the previous page.)

f. Try to restart the dryer with the main door open.

g. The microprocessor controller (computer) board's light emitting diode (L.E.D.) display must read "DOOR."

h. Close the main door and restart the dryer.

i. Functional check of microprocessor controller (computer) board is complete.

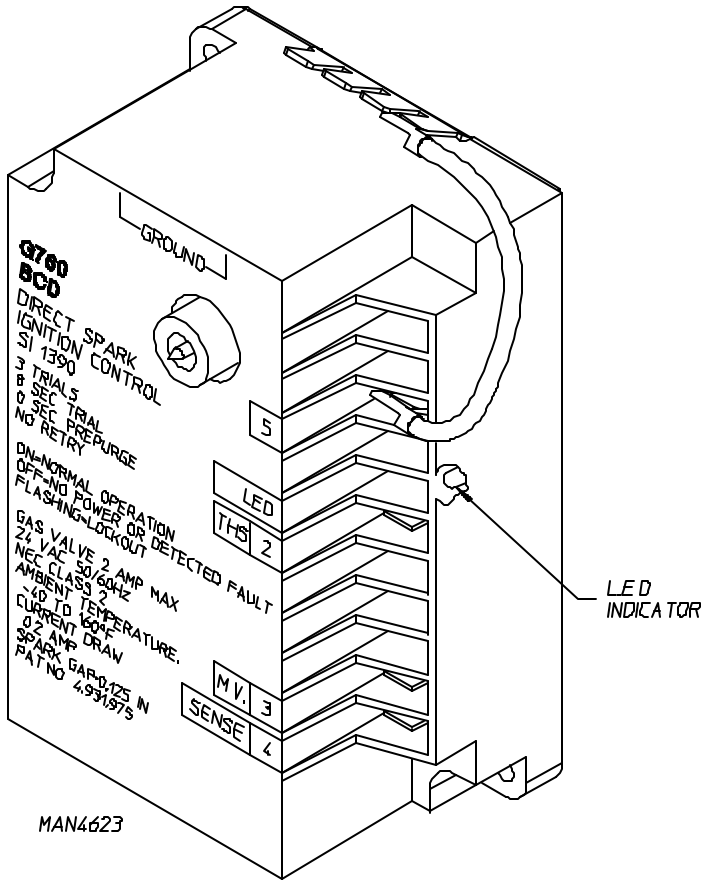
2. For Models With Johnson Controls Direct Spark Ignition (DSI) Module (G760)

Theory Of Operation:

Start the drying cycle. When the gas burner ignites within the chosen trial for ignition time (6-seconds), the flame sensor detects gas burner flame and signals the DSI module to keep the gas valve open...as long as there is a call for heat. The DSI module will "LOCKOUT" if the gas burner flame is not sensed at the end of the trial for ignition period. The trial for ignition period will be repeated for a total of three (3) retries/trials (the initial try and two [2] more retries/trials). If the flame is not sensed at the end of the third retry/trial (inter-purge period of 30-seconds) the DSI module will "LOCKOUT" (L.E.D. flashes).

A steady L.E.D. indicator indicates *normal operation*.

No L.E.D. indicator indicates a power or an internal failure has occurred.



3. For Direct Spark Ignition (DSI) System Models Manufactured With **ADC** Module Part No. 128973

a. Upon completing installation of the replacement DSI module, reestablish power to the dryer.

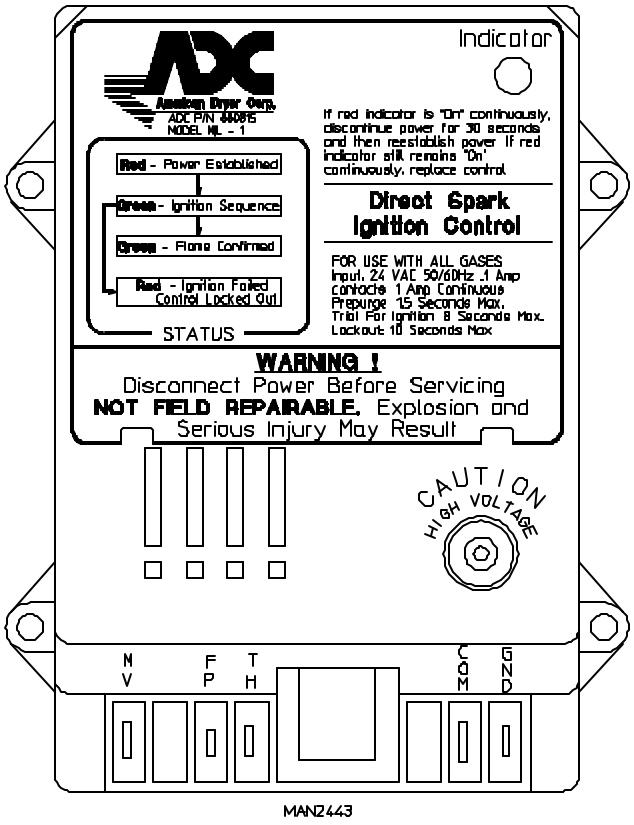
b. Starting the drying cycle.

c. The ignition DSI module's light emitting diode (L.E.D.) indicator will light "red" for up to approximately 1.5-seconds (prepurge time).

d. The module's indicator light will then turn "green." The gas valve will be energized and the ignitor probe will spark for approximately 8-seconds. The burner flame **should now be** established.

e. With the burner flame on, remove the flame sensor wire from the FS terminal of the DSI module.

f. The burner flame must shut off and the ignition module must lockout with the DSI module's indicator light "red."


Indicator
ADC P/N 128973
MODEL ML - 1
If red indicator is "On" continuously, discontinue power for 30 seconds and then reestablish power. If red indicator still remains "On" continuously, replace control.
Red - Power Established
Green - Ignition Sequence
Green - Flame Confirmed
Red - Ignition Failed Control Locked Out
STATUS
Direct Spark Ignition Control
FOR USE WITH ALL GASES
Input, 24 VAC 50/60Hz .1 Amp
Contacts 1 Amp Continuous
Prepurge 15 Seconds Max.
Trial For Ignition 8 Seconds Max.
Lockout 10 Seconds Max
WARNING !
Disconnect Power Before Servicing
NOT FIELD REPAIRABLE. Explosion and Serious Injury May Result
CAUTION HIGH VOLTAGE
MV
FP
TH
COM
GND
MAN2443

g. Stop the drying cycle, with the flame sensor wire still removed, restart the drying cycle.

h. The ignition module must proceed through the prepurge, with the indicator light "red," the ignition trial time of approximately 8-seconds, with the indicator light "green," and then proceed to lockout with the indicator light "red."

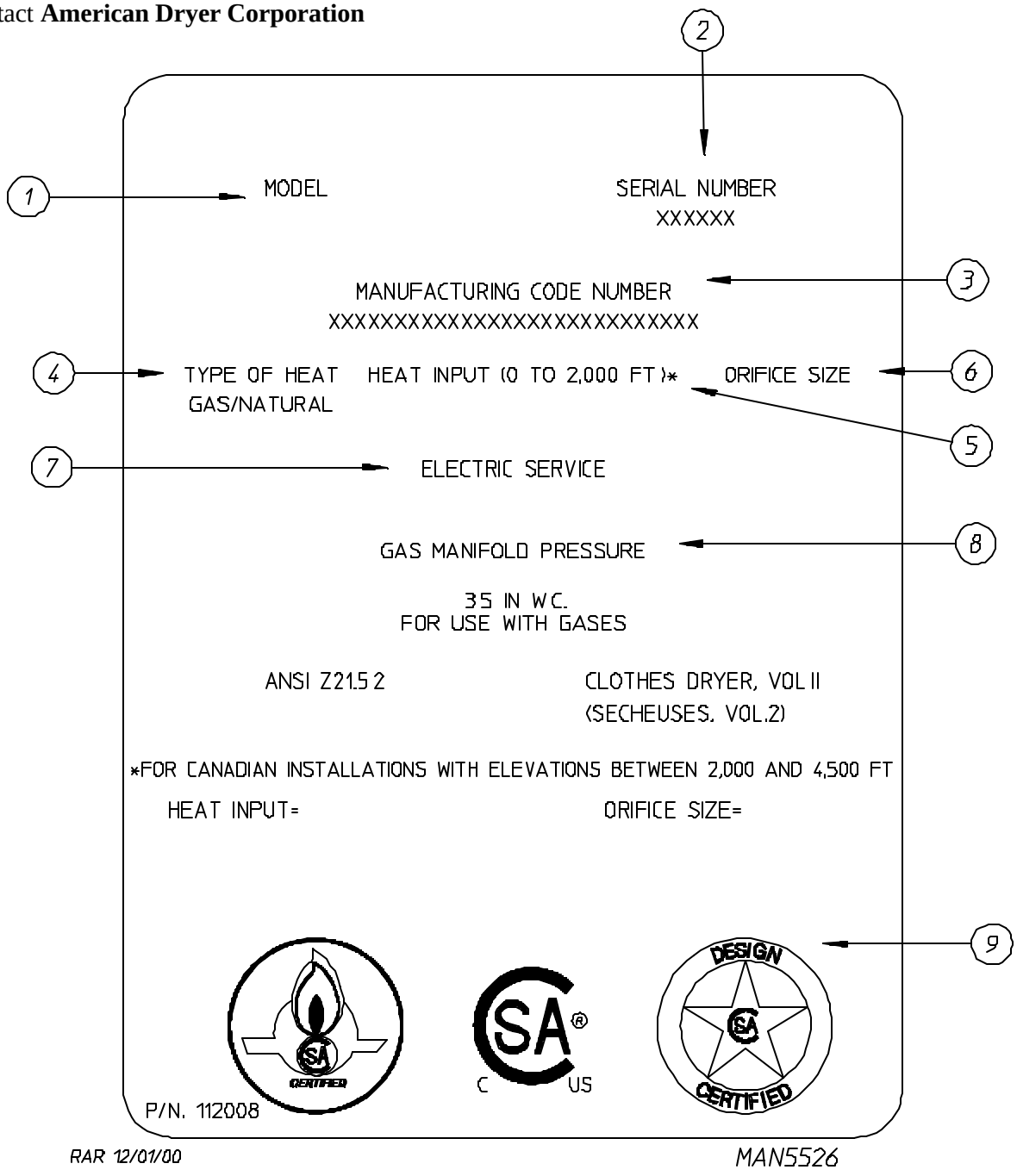
i. Functional check of the DSI module is complete.

1) Replace the flame sensor wire from the FS terminal to the DSI module.

SECTION VIII
DATA LABEL INFORMATION

A. DATA LABEL

Contact **American Dryer Corporation**



When contacting **ADC**, certain information is required to insure proper service/parts information from **ADC**. This information is on the data label located on the upper left side panel area behind the top control (access) door. When contacting **ADC** please have the **model number** and **serial number** available.

THE DATA LABEL

1. **MODEL NUMBER**
   The model number is an **ADC** number, which describes the size of the dryer and the type of heat (gas, electric, or steam).

2. **SERIAL NUMBER**
   The serial number allows **ADC** to gather information on your particular dryer.

3. **MANUFACTURING CODE NUMBER**
   The manufacturing code number is a number issued by **ADC,** which describes **ALL** possible options on your particular model.

4. **TYPE OF HEAT**
   This describes the type of heat for your particular dryer, gas (either natural gas or liquid propane [L.P.]) or steam.

5. **HEAT INPUT** (for GAS DRYERS)
   This describes the heat input in British Thermal Units per Hour (BTUH).

6. **ORIFICE SIZE** (for GAS DRYERS)
   Gives the number drill size used.

7. **ELECTRIC SERVICE**
   This describes the electric service for your particular model.

8. **GAS MANIFOLD PRESSURE** (for GAS DRYERS)
   This describes the manifold pressure taken at the gas valve tap.

9. **APPLICABLE APPROVAL SEAL(S)**
   I.E., Canadian Standards Association International.

SECTION IX

BURNER AND BASKET (TUMBLER)/LINT CHAMBER MANUAL RESET HI-LIMIT INSTRUCTIONS

IMPORTANT

MANUAL RESET HI-LIMIT INSTRUCTIONS

FOR PHASE 6 MODELS
(GAS MODELS ONLY)

This dryer was manufactured with a burner manual reset hi-limit and basket (tumbler)/lint chamber hi-limit thermostat which is monitored by the Phase 6 computer. If either manual reset thermostat is open prior to start of the drying cycle, the dryer will start momentarily and then shutdown, the Phase 6 computer will display an error code with an audio indication. If the basket (tumbler)/lint chamber hi-limit thermostat is open, the display will read "dRUM SAFETY FAIL." If the burner hi-limit thermostat is open, the display will read "bURNER SAFETY FAIL."

If either manual reset hi-limit thermostat opens during a drying cycle, the display will show the applicable error code described above along with an audio indication. If the drum temperature is above 100° F (38° C), the dryer will continue to run with no heat for 3 minutes or until the drum temperature has flattened below 100° F (38° C). The "STOP/CLEAR" button on the Phase 6 keyboard (touch pad) **must be** pressed to clear the error condition. The open manual reset hi-limit thermostat **must be** reset "manually" prior to the start of the next cycle.

This hi-temperature condition may be caused due to a restricted exhaust, poor airflow, or improper burner operation.

The location of the burner hi-limit is on the right side of the burner box and the basket (tumbler) hi-limit is located in the lint chamber area.

WARNING: Discontinue power to dryer before attempting to reset hi-limit.

IMPORTANT

This dryer is equipped with a burner hi-limit and tumbler/lint chamber hi-limit thermostat which must be reset manually.

WARNING: Discontinue power to dryer before attempting to reset hi-limit.

ADC P/N: 114093

IMPORTANT

MANUAL RESET HI-LIMIT INSTRUCTIONS

FOR PHASE 6 MODELS
(STEAM MODELS ONLY)

This dryer was manufactured with a manual reset basket (tumbler)/lint chamber hi-limit thermostat which is monitored by the Phase 6 computer. If the manual reset thermostat is open prior to start of the drying cycle, the dryer will start momentarily and then shutdown, displaying "dRUM SAFETY FAIL" with an audio indication.

If the manual reset hi-limit thermostat opens during a drying cycle, the display will read "dRUM SAFETY FAIL" with an audio indication. If the drum temperature is above 100° F (38° C), the dryer will continue to run with no heat for 3 minutes or until the drum temperature has flattened below 100° F (38° C). The "STOP/CLEAR" button on the Phase 6 keyboard (touch pad) **must be** pressed to clear this "dRUM SAFETY FAIL" condition. The open manual reset hi-limit thermostat **must be** reset "manually" prior to the start of the next cycle.

This hi-temperature condition may be caused due to a restricted exhaust, poor airflow, or improper burner operation.

The basket (tumbler) manual reset hi-limit is locked in the chamber area.

WARNING: Discontinue power to dryer before attempting to reset hi-limit.

IMPORTANT

This dryer is equipped with a lint chamber hi-limit thermostat which must be reset manually.

WARNING: Discontinue power to dryer before attempting to reset hi-limit.

ADC P/N: 114501

ADC 113312 **1 -** 02/06/01-35 **2 -** 03/01/01-100 **3 *** 05/09/01-100
4 * 08/08/01-100

American Dryer Corp.